

N71-23964

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Technical Report 32-1413

Supplement 1

*An Extensive English Language Bibliography
on Graph Theory and Its Applications*

Narsingh Deo

CASE FILE
COPY

JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CALIFORNIA

April 15, 1971

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Technical Report 32-1413

Supplement 1

*An Extensive English Language Bibliography
on Graph Theory and Its Applications*

Narsingh Deo

JET PROPULSION LABORATORY
CALIFORNIA INSTITUTE OF TECHNOLOGY
PASADENA, CALIFORNIA

April 15, 1971

Prepared Under Contract No. NAS 7-100
National Aeronautics and Space Administration

Preface

The work described in this report was performed under the cognizance of the Astrionics Division of the Jet Propulsion Laboratory.

In October of 1969 the Jet Propulsion Laboratory published a technical report entitled "An Extensive English Language Bibliography on Graph Theory and Its Applications," TR 32-1413. This report contains about 2200 entries, and a six-page guide "Where to Begin in Graph Theory."

The report was received with surprising enthusiasm, as evidenced by over three hundred requests for reprints.

This widespread interest in the original bibliography, the rapid growth of papers in graph theory, and its ever expanding scope of applications to such fields as computer sciences have prompted the author to put forth this supplement.

Most of the 841 listings cited in this supplement have appeared in the past two years. Some are papers that were overlooked in the original report. Dissertations or internal reports which were listed in the original bibliography but have been published in journals since are listed.

For the sake of space, only those sources which are in English—original or in translation—have been listed. Unpublished works, private communications, and technical reports not generally available have been omitted. Internal reports subsequently published in open literature, also have been left out. Names of authors have been arranged alphabetically, with their works first in chronological order and then in alphabetical order within the chronological order. Co-authors and their works directly follow the first author alphabetically as originally listed in the work. With this system, the reader may check for works co-authored by certain writers by quickly checking the second, third, or fourth author name throughout the alphabet.

It is hoped that this bibliography will be of service to students of graph theory—both applied and pure. Abbreviations for Journals are those used by *Mathematical Review*.

Acknowledgment

During the preparation of this supplement, helpful comments and suggestions have been provided by many individuals. Included among these are: Professor Frank Harary, Professor I. G. Good, Dr. James Turner, Dr. T. C. Hu, Professor W. K. Chen, Professor Jurg Nievergelt, and Mr. Barry Shay. The author is thankful to Carol Sterkin of the JPL Library for her assistance in literature search and to Marie Sumpter for the typing of the final draft. Thanks are also due to Benn Martin and Tom Gottlieb for providing the proper atmosphere for this work to be undertaken. Finally the author would like to thank his wife, Karen, who assisted in sorting, verifying, and proofreading.

Contents

Bibliography	1
-------------------------------	----------

Bibliography

Aarts, J. M., and Degroot, J.

"A Case of Coloration in the Four-Color Problem," *Nieuw Arch. Wisk.*, Vol. 11, No. 3, pp. 10-18, 1963.

Abramson, H. D.

"A Note on a Result of Knuth or Identities Grow on Trees," *J. Combinatorial Theory*, Vol. 7, pp. 371-373, 1970.

Adam, A.

"On the Repetition-Free Realization of Truth Functions by Two-Terminal Graphs," *Magyar Tud. Akad. Mat. Kutato Int. Kozl.*, Vol. 9, pp. 11-20, 1964.

"The Quasi-Series Decomposition of Two-Terminal Graphs," *Publ. Math. Debrecen.*, Vol. 14, pp. 415-416, 1967.

Adel'son-Vel'skii, G. M., and Landis, E. M.

"An Algorithm for the Organization of Information," *Soviet Math. Dokl.*, Vol. 3, pp. 1259-1263, 1962.

Adel'son-Vel'skii, G. M., Veisfeiler, B. Ju., Leman, A. A., and Faradzev, I. A.

"Example of A Graph Without A Transitive Automorphism Group," *Soviet Math. Dokl.*, Vol. 10, No. 2, pp. 440-441, 1969.

Aigner, M.

"Graphs and Binary Relations," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 1-21, 1969.

"A Characterization Problem in Graph Theory," *J. Combinatorial Theory*, Vol. 6, pp. 45-55, 1969.

"The Uniqueness of the Cubic Lattice Graph," *J. Combinatorial Theory*, Vol. 6, pp. 282-297, 1969.

"Graphs Whose Complement and Line Graph Are Isomorphic," *J. Combinatorial Theory*, Vol. 7, pp. 273-275, 1969.

Akers, S. B., Jr.

"The Use of the Wye-Delta Transformations in Network Simplifications," *Operations Res.*, Vol. 8, pp. 311-323, 1960.

Ali, A. A.

"On Two-Tree Transformations and the Separation of Two-Tree Sets," *J. Franklin Inst.*, Vol. 274, pp. 337-351, 1962.

Aliev, I. S., and Seiden, E.

"Steiner Triple Systems and Strongly Regular Graphs," *J. Combinatorial Theory*, Vol. 6, pp. 33-39, 1969.

Allsop, R. E.

"Selection of Offsets to Minimize Delay to Traffic in A Network Controlled by Fixed-Time Signals," *Trans. Sci. (U. S.)*, Vol. 2, No. 1, pp. 1-13, Feb. 1968.

Alspach, B.

"A Combinatorial Proof of a Conjecture of Goldberg and Moon," *Canad. Math. Bull.*, Vol. 11, pp. 655-661, 1968.

Alvarez, L. R.

"Undirected Graphs Realizable as Graphs of Modular Lattices," *Canad. J. Math.*, Vol. 17, pp. 923-932, 1965.

Amoia, V., and Cottafava, G.

"On Central Trees," *Proc. 12th Midwest Symposium on Circuit Theory*, paper XIV.1, 1969.

Anderson, S. S., and Chartrand, G.

"The Lattice-Graph of the Topology of a Transitive Directed Graph," *Math. Scand.*, Vol. 21, pp. 105-109, 1968.

Anderson, S. S., and Harary, F.

"Trees and Unicyclic Graphs," *Math. Teacher*, Vol. 60, pp. 345-348, 1967.

Anderson, S. S.

"Graph Theory and Finite Projective Planes," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 23-26, 1969.

"Graph Theory and Finite Combinations," *Markham Mathematics Services*, 1970.

Ang, S. L., and Teh, H. H.

"Finite Homogeneous Auto-Extensions of Graphs," *Nanta Math.*, Vol. 1, pp. 82-86, 1966/1967.

Archbold, J. W., and Smith, C. A. B.

"An Extension of a Theorem of Koenig on Graphs," *Mathematika*, Vol. 9, pp. 9-10, 1962.

Ardon, M., and Malik, N.

"A Recursive Algorithm for Generating Trees and Signed Complete Trees," *Proc. 12th Midwest Symposium on Circuit Theory*, paper VII.2, 1969.

Auslander, L., Brown, T. A., and Youngs, J. W. T.

"The Embedding of Graphs in Manifolds," *J. Math. Mech.*, Vol. 12, pp. 629-634, 1963.

Auslander, L., and Trent, H. M.

"On the Topology of Printed Circuits," *Trans. IRE CT-8*, No. 4, 1959.

Ayoub, J. N., and Frisch, I. T.

"Degree Realization of Undirected Graphs in Reduced Form," *J. Franklin Inst.*, Vol. 289, No. 4, pp. 303-312, Apr. 1970.

Baer, J. L., and Estrin, G.

"'A priori' Scheduling of Bi-logic Graph Models of Computations," *Project Planning by Network Analysis*, pp. 199-227, 1969.

Baker, J. K.

"A Combinatorial Proof of Tucker's Lemma for the n-Cube," *J. Combinatorial Theory*, Vol. 8, pp. 279-290, 1970.

Balakrishnan, R.

"Characteristic Polynomials of Incidence Matrices," *J. Combinatorial Theory*, Vol. 7, pp. 322-330, 1969.

Balas, E.

"Solution of Large-Scale Transportation Problems Through Aggregation," *Operations Res.*, Vol. 13, pp. 82-93, 1965.

"Machine Sequencing via Disjunctive Graphs: An Implicit Enumeration Algorithm," *Operations Res.*, Vol. 17, No. 6, pp. 941-957, 1969.

Balas, E., and Ivanescu, P. L.

"On the Transportation Problem II.," *Cahiers Centre Etudes Recherche Oper.*, Vol. 4, pp. 131-160, 1962.

"On the Generalized Transportation Problem," *Management Sci.*, Vol. 11, pp. 188-202, 1964/1965.

Bapswara Rao, V. V., and Sankara Rao, K.

"Planar Graphs and Circuits," *Matrix Tensor Quart.*, Vol. 18, pp. 88-91, 1968.

Barbay, J., and Zobrist, G. W.

"Optimum Tree Generation by Tree Transformation," *Proc. of 11th Midwest Symposium on Circuit Theory*, Univ. Notre Dame, Indiana, pp. 463-71, 1968.

Barnard, H. M., and Choe, C. Y.

"Synthesis Procedure for Cut-Set Matrices," *IEEE-Southwestern Conference Rec.*, Dallas, Texas, 4 pp., Apr. 1966.

Barnette, D.

"Polyhedral Graphs," Ph.D. Thesis, University of Wash., *Dis. Abs.*, Vol. 28, p. 2019-B., 1967.

"A Completely Unambiguous 5-Polyhedral Graph," *J. Combinatorial Theory*, Vol. 9, pp. 44-53, 1970.

Barnette, D. W., and Grünbaum, B.

"On Steinitz's Theorem Concerning Convex 3-Polytopes and on Some Properties of Planar Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 27-40, 1969.

Barnette, D., and Jucovic, E.

"Hamiltonian Circuits on 3-Polytopes," *J. Combinatorial Theory*, Vol. 9, pp. 54-59, 1970.

Baron, G., and Imrich, W.

"On the Maximal Distance of Spanning Trees," *J. Combinatorial Theory*, Vol. 5, pp. 378-385, 1968.

Basu, S. K.

"Transformations on Directed Graphs," *J. Combinatorial Theory*, Vol. 9, pp. 244-256, 1970.

Baum, L. E., and Eagon, J. A.

"Pseudo-Symmetric Connected Graph," *Canad. J. Math.*, Vol. 18, pp. 237-239, 1966.

Beatty, J. C., and Miller, R. E.

"On Equi-Cardinal Restrictions of a Graph," *Canad. Math. Bull.*, Vol. 7, pp. 369-375, 1964.

Bednarek, A. R., and Taulbee, O. E.

"On Maximal Chains," *Rev. Roumaine Math. Pures Appl.*, Vol. 11, pp. 23-25, 1966.

Bedrosian, S. D.

"Simplified Explicit Solution of Networks with Two Internal Nodes," *IEEE Trans. Communication & Electronics*, Vol. 83, No. 71, pp. 219-24, Mar. 1964.

"Topological Guides to Integrated RC Circuit Design," *Tenth Midwest Symposium on Circuit Theory*, Purdue University, VI. 1.1-VI. 1.12, 1967.

Behzad, M.

"Analogues of Ramsey Numbers," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 41-43, 1969.

Behzad, M., and Chartrand, G.

"Line-Coloring of Signed Graphs," *Elem. Math.*, Vol. 24, pp. 49-52, 1969.

Behzad, M., Chartrand, G., and Nordhaus, E. A.

"Triangles in Line-Graphs and Total Graphs," *Indian J. Math.*, Vol. 10, pp. 109-120, 1968.

Behzad, M., and Mahmoodian, S. E.

"On Topological Invariants of the Product of Graphs," *Canad. Math. Bull.*, Vol. 12, pp. 157-166, 1969.

Behzad, M., and Radjavi, H.

"The Line Analog of Ramsey Numbers," *Israel J. Math.*, Vol. 5, pp. 93-96, 1967.

"Structure of Regular Total Graphs," *J. London Math. Soc.*, Vol. 44, pp. 433-436, 1969.

Beineke, L. W.

"A Survey of Packings and Coverings of Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 45-53, 1969.

"Minimal Decompositions of Complete Graphs into Subgraphs with Embeddability Properties," *Canad. J. Math.*, Vol. 21, pp. 992-1000, 1969.

"Characterizations of Derived Graphs," *J. Combinatorial Theory*, Vol. 9, pp. 129-135, 1970.

Beineke, L. W., and Chartrand, G.

"The Coarseness of a Graph," *Compositio Math.*, Vol. 19, pp. 290-298, 1968.

Beineke, L. W., and Guy, R. K.

"The Coarseness of $K_{m,n}$," Research Paper No. 44, Dept. of Mathematics, University of Calgary, Mar. 1968.

Beineke, L. W., and Harary, F.

"Local Restrictions for Various Classes of Directed Graphs," *J. Lond. Math. Soc.*, Vol. 40, pp. 87-95, 1965.

Beineke, L. W., and Moon, J. W.

"Several Proofs of the Number of Labeled 2-Dimensional Trees," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 11-20, 1969.

Beineke, L. W., and Pippert, R. E.

"The Number of Labeled k-Dimensional Trees," *J. Combinatorial Theory*, Vol. 6, pp. 200-205, 1969.

Beineke, L. W., and Plummer, M. D.

"On the 1-factors of a Nonseparable Graph," *J. Combinatorial Theory*, Vol. 2, pp. 285-289, 1967.

Bekishev, G. A.

"Parallelization of Computational Algorithms," *Computer Elem. and Systems*, pp. 197-204, 1962-63.

Bellman, R., and Cooke, K. L.

"The Konigsberg Bridges Problem Generalized," *J. Math. Anal. Appl.*, Vol. 25, pp. 1-7, 1969.

Bellman, R., Cooke, K. L., and Lockett, J. A.

Algorithms, Graphs and Computers, Academic Press, New York, 246 pp., 1970.

Bender, E. A., and Goldman, J. R.

"The Enumerative Uses of Generating Functions," Tech. Report., Dept. of Statistics, Harvard Univ., Cambridge, Mass., 23 pp., 1969.

Bender, E. A., and Tucker, T. W.

"The Exponents of Strongly Connected Graphs," *Canad. J. Math.*, Vol. 21, pp. 769-782, 1969.

Bender, W. G.

"Signal-flow Graphs, Random Processes and Synchronization of Digital Pulse Trains," *Proc. 2nd Congress Info. Sys. Sci.*, pp. 229-238.

Benedict, C. P.

"On Self-dualisms in Graphs and Networks," Ph.D. Dissertation, University of Waterloo, Aug. 1969.

Benes, V. E.

Mathematical Theory of Connecting Networks and Telephone Traffic, Academic Press, New York, 333 pp., 1965.

"Some Examples of Comparisons of Connecting Networks," *Bell System Tech. J.*, Vol. 95, No. 10, pp. 1829-1835, 1966.

Bereanu, B.

"Stochastic Transportation Problem: Case of Random Cost," *Com. Acad. R. P. Romine*, Vol. 13, 1963.

Berge, C.

"Graph Theory," *Amer. Math. Monthly*, Vol. 71, pp. 471-481, 1964.

"Lectures on Graph Theory," Tata Institute of Fundamental Research, Bombay, India, 56 pp., 1967.

"The Rank of a Family of Sets and Some Applications to Graph Theory," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, New York, pp. 49-58, 1969.

Berman, G., and Tutte, W. T.

"The Golden Root of a Chromatic Polynomial," *J. Combinatorial Theory*, Vol. 6, pp. 301-302, 1969.

Bhargava, T. N., and Ahlborn, T. J.

"On Topological Spaces Associated with Digraphs," *Acta Math. Acad. Sci. Hungar.*, Vol. 19, pp. 47-52, 1968.

Biondi, E., Divieti, L., and Guardabassi, G.

"Counting Paths, Circuits, Chains, and Cycles in Graphs: A Unified Approach," *Canad. J. Math.*, Vol. 22, No. 1, 1970.

Biondi, E., Divieti, L., Roveda, C., and Schmid, R.

"Optimal Solution for a Class of Assignment and Transportation Problems," *Computing Methods in Optimization Problems*, Vol. 2, pp. 35-45, Sep. 1968.

Birkhoff, G. D., and Lewis, D.

"Chromatic Polynomials," *Trans. Amer. Math. Soc.*, Vol. 60, pp. 355-451, 1946.

Blatter, C.

"On the Algebra of the Four-Color Problem," *Enseignement Math.*, Vol. 11, pp. 175-193, 1965.

Bobrow, L. S.

"Graph Theoretic Variable-Length Codes," Ph.D. Dissertation, Northwestern University, Evanston, Ill., August 1968.

Bobrow, L. S., and Hakimi, S. L.

"Graph Theoretic Prefix Codes and Their Synchronizing Properties," *Information and Control*, Vol. 15, No. 1, pp. 70-94, July 1969.

"Graph Theoretic q-nary Codes," *Fourth Ann. Princeton Conf. Information Sciences and Systems*, 1970.

Bohm, C., and Santolini, A.

"A Quasi-Decision Algorithm for the P-Equivalence of Two Matrices," *ICC Bull.*, Vol. 3, No. 1, pp. 57-69, January 1964.

Boland, J. Ch.

"Embedding of Graphs in the Projective Plane," *Fund. Math.*, Vol. 57, pp. 195-203, 1965.

Boland, J. Ch.

"Embedding Graphs into Orientable Surfaces," *Nederl. Akad. Wetensch. Proc. Ser. A* 70, Vol. 29, pp. 33-44, 1967.

Bollobás, B.

"Determination of Extremal Graphs by Using Weights," *Wiss. Z. Techn. Hochsch. Ilmenau*, Vol. 13, pp. 419-421, 1967.

"Weakly k-Saturated Graphs," *Beitrage zur Graphentheorie* (Kolloquium, Manebach, 1967), pp. 25-31, Teubner, Leipzig, 1968.

"A Lower Bound for the Number of Non-isomorphic Matroids," *J. Combinatorial Theory*, Vol. 7, pp. 366-368, 1970.

Bondy, J. A.

"Bounds for the Chromatic Number of a Graph," *J. Combinatorial Theory*, Vol. 7, pp. 96-98, 1969.

"On Kelly's Congruence Theorem For Trees," *Proc. Cambridge Philos. Soc.*, Vol. 65, pp. 1-11, 1969.

"On the Reconstruction of a Graph from its Closure Function," *J. Combinatorial Theory*, Vol. 7, pp. 221-229, 1969.

Bondy, J., and Welsh, D.

"Note on the Monomer Dimer Problem," *Proc. Cambridge Philos. Soc.*, Vol. 62, pp. 503-505, 1966.

Bose, R. C.

"Strongly Regular Graphs, Partial Geometries and Partially Balanced Designs," *Pacific J. Math.*, Vol. 13, pp. 389-419, 1963.

Bottger, G., and Harders, H.

"Note on a Problem by Hakimi Concerning Planar Graphs Without Parallel Elements," *J. SIAM*, Vol. 12, pp. 838-839, 1964.

Bourgoin, M. H., and Heurgon, E. M. J.

"Study and Comparison of Algorithms of the Shortest Path Through Planned Experiments," *Project Planning by Network Analysis*, pp. 106-118, 1969.

Bouwer, I. Z.

"An Edge But Not Vertex Transitive Cubic Graph," *Canad. Math. Bull.*, Vol. 11, pp. 533-535, 1968.

"Section Graphs for Finite Permutation Groups," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 55-61, 1969.

"Section Graphs for Finite Permutation Groups," *J. Combinatorial Theory*, Vol. 6, pp. 378-386, 1969.

Bouwer, I. Z., and Broere, I.

"Note on t-minimal Complete Bipartite Graphs," *Canad. Math. Bull.*, Vol. 11, pp. 729-732, 1968.

Bowen, R.

"The Generation of Minimal Triangle Graphs," *Math. Comp.*, Vol. 21, pp. 248-250, 1967.

Bratton, D.

"Efficient Communication Networks," *Cowles Comm. Disc. Paper*, Vol. 2119, 1955.

Bredeson, J. G., and Hakimi, S. L.

"Decoding of Graph Theoretic Codes," *IEEE Trans. Information Theory*, Vol. IT-13, pp. 348-349, Apr. 1967.

Brenner, J. L.

"The Transport Assignment Algorithm," *Canadian O.R. Society Journal*, Vol. 6, No. 2, pp. 89-95, 1968.

Breuer, M. A., and Folkman, J.

"An Unexpected Result in Coding the Vertices of a Graph," *J. Math. Anal. Appl.*, Vol. 20, No. 3, pp. 583-600, Dec. 1967.

Briggs, F.

"Solution of the Hitchcock Problem With One Single Row Capacity Constraint Per Row by the Ford-Fulkerson Method," *Naval Res. Logist. Quart.*, Vol. 9, pp. 107-120, 1962.

Brooks, R. L.

"A Procedure for Dissecting a Rectangle Into Squares, and An Example for the Rectangle Whose Sides Are in the Ratio 2:1," *J. Combinatorial Theory*, Vol. 8, pp. 232-243, 1970.

Brown, R. R., and Putnam, G. F.

"The Automation of Backwiring Design and Topological Layout," *AIEE Trans.*, Vol. 81, pp. 136-139, 1962.

Brown, T.

"The Representation of Planar Graphs by Convex Polyhedra," Rand Corp., Unpublished Note, Aug. 1960.

Brown, W. G.

"On Graphs That Do Not Contain a Thomsen Graph," *Canad. Math. Bull.*, Vol. 9, pp. 281-285, 1966.

Brown, W. G., and Jung, H. A.

"On Odd Circuits in Chromatic Graphs," *Acta Math. Acad. Sci. Hungar.*, Vol. 20, pp. 129-134, 1969.

Brownell, R.

"Growing the Trees of a Graph," *Proc. IEEE*, Vol. 56, pp. 1121-1123, June 1968.

Bruno, J., Steiglitz, K., and Weinberg, L.

"A New Planarity Test Based on 3-Connectivity," *IEEE Trans. Circuit Theory*, Vol. CT-17, No. 2, pp. 197-206, May 1970.

Bruter, C. P.

"An Algebraic Structure for Graphs on the Factorization of Groupoids," *Amer. Math. Monthly*, Vol. 76, pp. 658-661, 1969.

Bryant, S.

"Groups, Graphs, and Fermat's Last Theorem," *Amer. Math. Monthly*, Vol. 74, pp. 152-156, 1967.

Burkov, N., and Lovetskii, S. E.

"Maximal Flow Through Generalized Transport Network," *Automat. Remote Control*, Vol. 26, No. 12, pp. 2090-5, 1965.

Butrimenko, A. V., and Lazarev, V. G.

"System for Seeking Optical Message Transmission Paths," *Problems of Information Transmission*, Vol. 1, pp. 58-62, 1965.

Cantor, D. G., and Dimsdale, B.

"On Direction-Preserving Maps of Graphs," *J. Combinatorial Theory*, Vol. 6, pp. 165-176, 1969.

Carlitz, L.

"A Note on the Enumeration of Line Chromatic Trees," *J. Combinatorial Theory*, Vol. 6, pp. 99-101, 1969.

Carré, B. A.

"The Partitioning of Network Equations for Block Iteration," *Comput. J.*, Vol. 9, pp. 84-97, 1966.

Cartwright, D., and Gleason, T. C.

"The Number of Paths and Cycles in a Digraph," *Psychometrika*, Vol. 31, pp. 179-199, 1966.

Cartwright, D., and Harary, F.

"On the Colorings of Signed Graphs," *Elem. Math.*, Vol. 23, pp. 85-89, 1968.

Cayley, A.

"On the Analytical Forms Called Trees," *Amer. Math. J.*, Vol. 4, pp. 266-268, 1881.

Chan, S., Fu, Y., and Chan, S.

"On the Realization of Reliability Functions of Probabilistic Communication Networks," *J. Engrg. Math.*, Vol. 2, pp. 39-51, 1968.

Chan, S. G., and Chang, W. T.

"Modification of Minty's Method of Tree Listing," *IEEE Trans. Circuit Theory*, Vol. CT-12, p. 120, Mar. 1965.

Chan, S. P.

"Topology Cuts Design Drudgery," *Electronics*, Vol. 39, No. 23, pp. 112-121, Nov. 1966.

Chan, S. P., and Bapna, B. H.

"A Modification of the Coates Gain Formula for the Analysis of Linear Systems," *Intl. J. Control.*, Vol. 5, pp. 483-495, May 1967.

Chan, S. P., and Mai, H. N.

"A Flow-Graph Method for the Analysis of Linear Systems," *IEEE Trans. Circuit Theory*, Vol. CT-14, pp. 350-354, 1967.

Chang, W. T., and Chan, S. G.

"Fast Tree, Finding Method," *Proc. of 11th Midwest Symposium on Circuit Theory*, Univ. Notre Dame, Indiana, pp. 457-62, 1968.

Chao, C. Y.

"On a Problem of Berge," *Proc. Amer. Math. Soc.*, Vol. 14, p. 80, 1963.

"On a Theorem of Sabidussi," *Proc. Amer. Math. Soc.*, Vol. 15, pp. 291-292, 1964.

Charnes, A., and Kirby, M.

"The Dual Method and the Method of Balas and Ivanescu for the Transportation Model," *Cahiers Centre Etudes Recherche Oper.*, Vol. 6, No. 1, pp. 5-18, 1964.

Chartrand, G., and Frechen, J. B.

"On the Chromatic Number of Permutation Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 21-24, 1969.

Chartrand, G., and Geller, D. P.

"On Uniquely Colorable Planar Graphs," *J. Combinatorial Theory*, Vol. 6, pp. 271-278, 1969.

Chartrand, G., and Kapoor, S. F.

"The Many Facets of Graph Theory," *Mathematics*, Vol. 110, 290 pp., 1968.

"The Cube of Every Connected Graph is 1-Hamiltonian," *J. Res. Nat. Bur. Standards Sect. B*, Vol. 73B, pp. 47-48, 1969.

Chartrand, G., Kapoor, S. F., and Lick, D. R.

"n-Hamiltonian Graphs," *J. Combinatorial Theory*, Vol. 9, pp. 308-312, 1970.

Chartrand, G., and Kronk, H. V.

"Randomly Traceable Graphs," *SIAM J. Appl. Math.*, Vol. 16, pp. 696-700, 1968.

"On a Special Class of Hamiltonian Graphs," *Comment. Math. Helv.*, Vol. 44, pp. 84-88, 1969.

"The Point-Arboricity of Planar Graphs," *J. London Math. Soc.*, Vol. 44, pp. 612-616, 1969.

Chartrand, G., Kronk, H. V., and Lick, D. R.

"Randomly Hamiltonian Digraphs," *Fund. Math.*, Vol. 65, pp. 223-226, 1969.

Chartrand, G., Kronk, H. V., and Wall, C. E.

"The Point-Arboricity of a Graph," *Israel J. Math.*, Vol. 6, pp. 169-175, 1968.

Chen, W. K.

"Matrix Graphs and Bipartite Graphs," *IEEE Trans. Circuit Theory*, Vol. CT-12, pp. 268-269, 1965.

"On the Realization of a (p,s)-Digraph with Prescribed Degrees," *J. Franklin Inst.*, Vol. 281, No. 5, pp. 406-422, May 1966.

"On Unisignants and Their Evaluation," *SIAM J. Appl. Math.*, Vol. 16, pp. 603-619, 1968.

"Iterative Procedure for Generating Trees and Directed Trees," *Electronics Letters*, Vol. 4, No. 23, Nov. 15, 1968.

"Unified Theory on the Generation of Trees of a Graph, Part II. The Matrix Formulation," *Int. J. Electronics*, Vol. 27, No. 4, pp. 319-336, 1969.

"Unified Theory on the Generation of Trees of a Graph, Part I. The Wang Algebra Formulation," *Int. J. Electronics*, Vol. 27, No. 2, pp. 101-117, 1969.

"On Generation of Trees Without Duplication," *Proc. IEEE*, Vol. 57, No. 7, pp. 1292-1293, Jul. 1969.

"Conversion of Arbitrary Node into Source Node in Flow Graph," *Electronics Letters*, Vol. 5, No. 15, pp. 338-339, Jul. 1969.

"A Physical Interpretation of the Multiple-Node Removal Algorithm of a Flow Graph," *Proc. IEEE*, Vol. 57, No. 9, pp. 1691-1692, Sep. 1969.

"Generation of Trees and Cotrees of a Graph by Decomposition," *Proc. IEE (London)*, Vol. 116, No. 10, pp. 1639-1643, Oct. 1969.

"Computer Generation of Trees and Co-Trees in a Cascade of Multiterminal Networks," *IEEE Trans. Circuit Theory*, Vol. CT-16, No. 4, pp. 518-526, Nov. 1969.

"Modification of Topological Formulas for Active Two-Port Networks," *Proc. IEEE*, Vol. 57, No. 12, pp. 2166-2167, Dec. 1969.

"On the Nonsingular Submatrices of the Incidence Matrix of a Graph over the Real Field," *J. Franklin Inst.*, Vol. 289, No. 2, pp. 155-166, Feb. 1970.

Chung, S. H., Ellis, J. B., and Roe, P. H. O.

"Realization Methods for Circuit Matrices," *IEEE Conference Rec. 2nd Asilomar Conference on Circuits & Systems*, pp. 612-615, 1969.

Chvátal, V.

"The Smallest Triangle-Free 4-Chromatic 4-Regular Graph," *J. Combinatorial Theory*, Vol. 9, pp. 93-94, 1970.

Cockayne, E. J.

"On the Steiner Problem," *Canad. Math. Bull.*, Vol. 10, pp. 431-450, 1967.

"Computation of Minimal Length Full Steiner Trees on the Vertices of a Convex Polygon," *Math. Comp.*, Vol. 23, pp. 521-531, 1969.

Cohen, D. E., Harary, F., and Kodama, Y.

"On the Embedding of Complete Graphs in Orientable Surfaces," *Mathematika*, Vol. 10, pp. 79-83, 1963.

Cornell, D. G., and Gotlieb, C. C.

"An Efficient Algorithm for Graph Isomorphism," *J. Assoc. Comput. Mach.*, Vol. 17, pp. 51-64, Jan. 1970.

Constantinescu, P.

"The Classification of a Set of Elements with Respect to a Set of Properties," *Computer J.*, Vol. 8, pp. 352-357, Jan. 1966.

Cotterman, C. W.

"Factor-Union Phenotype Systems," Publication No. 1302 of Lab. of Genetics, Univ. of Wisconsin, Madison, 18 pp.

Crapo, H. H.

"A Higher Invariant for Matroids," *J. Combinatorial Theory*, Vol. 2, pp. 406-417, 1967.

Crespi-Reghezzi, S., and Morpurgo, R.

"A Graph-Theory Oriented Extension to Algol," *Calcolo*, Vol. 5, No. 4, pp. 1-43, 1968.

"A Language for Treating Graphs," *Comm. ACM*, Vol. 13, No. 5, pp. 319-323, May 1970.

Crockett, E.

"Serial Decomposition of Sequential Machines into Specified Classes of Submachines," Ph.D. Thesis, Univ. Ill., 1967.

Crowe, D. W.

"Nearly Regular Polyhedra With Two Exceptional Faces," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 63-76, 1969.

Dalkey, N. C.

"Parity Patterns on Even Triangulated Polygons," *J. Combinatorial Theory*, Vol. 2, pp. 100-102, 1967.

Danzer, L., and Klee, V. L., Jr.

"Lengths of Snakes in Boxes," *J. Combinatorial Theory*, Vol. 2, pp. 258-265, 1967.

Davies, A. C.

"Signal Flow Graphs and Linear Feedback Shift Registers," *IEEE Trans. Information Theory*, Vol. IT-13, pp. 119-120, 1967.

Davies, D. W.

"Longest 'Separated' Paths and Loops in an N-Cube," *IEEE Trans. Electronic Computers*, Vol. EC-14, p. 261, 1965.

de Bruijn, N. G.

"A Color Theorem for Infinite Graphs and a Problem in the Theory of Relations," *Nederl. Akad. Wetensch. Proc. Ser. A 54*, Vol. 13, pp. 369-373, 1951.

"Color Patterns That Are Invariant Under a Given Permutation of the Colors," *J. Combinatorial Theory*, Vol. 2, pp. 418-421, 1967.

"Enumeration of Tree-Shaped Molecules," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 59-68, 1969.

de Bruijn, N. G., and Klarner, D. A.

"Enumeration of Generalized Graphs," *Nederl. Akad. Wetensch. Proc. Ser. A72-Indag. Math.*, Vol. 31, pp. 1-9, 1969.

de Groot, J.

"Groups Represented by Homeomorphism Groups," *Math. Ann.*, Vol. 138, pp. 80-102, 1959.

Dénes, J.

"On Graph Representation of Semigroups," *Proceedings of the Calgary International Conference on Combinatorial Structures and their Applications*, edited by Richard Guy, et al., Gordon & Breach, New York, pp. 55-57, 1970.

"Some Combinatorial Properties of Transformations and Their Connections with the Theory of Graphs," *J. Combinatorial Theory*, Vol. 9, pp. 108-116, 1970.

Denniston, R. H. F.

"Some Maximal Arcs in Finite Projective Planes," *J. Combinatorial Theory*, Vol. 6, pp. 317-319, 1969.

Denorsky, M.

"Games and Graphs," *Tech. Eng. News*, Vol. 48, No. 3, pp. 36-39, 1966.

Deo, N.

"Cycle Elimination in Weighted Digraphs by Orientation Reversal of Edges," *Third Hawaii International Conference on System Sciences*, pp. 419-422, Jan. 1970.

"Extraction of Complete Subgraphs: Command Prefix Codes for TOPS," in *Supporting Research and Advanced Development*, Space Program Summary 37-66, Vol. III. Jet Propulsion Laboratory, Pasadena, Calif., 1971.

Desler, J., and Hakimi, S. L.

"A Graph-Theoretic Approach to a Class of Integer-Programming Problems," *Operations Res.*, Vol. 17, pp. 1017-1033, 1969.

Deuel, D. R., and Gill, A.

"Some Decision Problems Associated with Weighted, Directed Graphs," *SIAM J. Appl. Math.*, Vol. 14, pp. 970-979, 1966.

di Paola, J. W.

"Contribution to the Theory of Block Designs," Ph.D. Thesis, City Univ., N. Y., *Dis. Abs.*, Vol. 28, pp. 995-8, 1967.

Dial, R. B.

"Algorithm 360, Shortest-Path Forest with Topological Ordering (H)," *Comm. ACM*, Vol. 12, No. 11, pp. 632-633, Nov. 1969.

Dirac, G. A.

"Reduction Theorem for Abstract Graphs with Applications to the Four-Color Problem," *Wiss. Z. Martin-Luther-University Halle-Wittenberg Math-Natur. Reihe.*, Vol. 10, No. 1, p. 115, 1961.

"On the Four-Color Conjecture," *Proc. London Math. Soc.*, Vol. 13, pp. 193-218, 1963.

"On Complete Graphs and Complete Stars Contained as Subgraphs in Graphs," *Math. Scand.*, Vol. 12, pp. 39-46, 1963.

"Some Results Concerning the Structure of Graphs," *Canad. Math. Bull.*, Vol. 6, pp. 183-210, 1963.

"Extensions of Mengers Theorem," *J. London Math. Soc.*, Vol. 38, pp. 148-161, 1963.

"Homomorphism Theorems for Graphs," *Math. Ann.*, Vol. 153, pp. 69-80, 1964.

Dirac, G. A., and Erdős, P.

"On the Maximal Number of Independent Circuits in a Graph," *Acta Math. Acad. Sci. Hungar.*, Vol. 14, pp. 79-94, 1963.

Donath, W. E.

"Statistical Properties of the Placement of a Graph," *SIAM J. Appl. Math.*, Vol. 16, No. 2, pp. 439-457, 1968.

Doran, J. E., and Michie, D.

"Experiments with the Graph Traverser Program," *Proc. Roy. Soc. Ser. A*, Vol. 294, pp. 235-259, 1966.

Douglas, R. J.

"Upper Bounds on the Length of Circuits of Even Spread in the d-cube," *J. Combinatorial Theory*, Vol. 7, pp. 206-214, 1969.

"Some Results on the Maximum Length of Circuits of Spread k in the d -cube," *J. Combinatorial Theory*, Vol. 6, pp. 323-339, 1969.

Dowling, T. A.

"A Characterization of the T_m Graph," *J. Combinatorial Theory*, Vol. 6, pp. 251-263, 1969.

Duby, J. J., and Pohl, I.

"Improved Hamiltonian Paths," *Comm. ACM*, Vol. 11, Jan. 1968.

Duijvestijn, A. J. W.

"An Algorithm that Investigates the Planarity of a Network," *Computers in Mathematical Research*, Editors: Churchhouse, R. F., and Herz, J. C., North-Holland, pp. 68-83, 1968.

Duke, R. A.

"Can the Complete Graph With $2n + 1$ Vertices Be Packed With Copies of an Arbitrary Tree Having n Edges?" *Amer. Math. Monthly*, Vol. 76, No. 10, Dec. 1969.

"The Genus, Regional Number, and Betti Number of a Graph," *Canad. J. Math.*, Vol. 18, pp. 817-822, 1966.

Duke, R. A., and Brown, T. A.

"An Irreducible Graph Consisting of a Single Block," Rand Corp., Report No. RM-4340-PR, Feb. 1965.

Dulmage, A. L., Johnson, D. M., and Mendelsohn, N. S.

"Studies in Graph Theory. Connectivity and Reducibility of Graphs," *U. S. Government Research Reports*, Document Nos. AD-256 227, Div. 15 and AFOSR-601, 22 pp., 1961.

Dulmage, A. L., and Mendelsohn, N. S.

"The Term and Stochastic Rank of a Matrix," *Canad. J. Math.*, Vol. 11, pp. 269-279, 1959.

"The Structure of Powers of Non-negative Matrices," *Canad. J. Math.*, Vol. 17, pp. 318-330, 1965.

Edmonds, J. R.

"Symmetric Imbeddings of Complete Graphs," *Notices Amer. Math. Soc.*, Vol. 7, No. 7, p. 948, Dec. 1960.

"Maximal Matching and a Polyhedron with Zero-One Vertices," *Nat. Bur. Stan. Rept.*, 1963.

Edmonds, J., and Fulkerson, D. R.

"Bottleneck Extrema," *J. Combinatorial Theory*, Vol. 8, pp. 299-306, 1970.

Efimova, E. N.

"On the Properties of Linguistic Control Graphs," *Kibernetika (Kiev)*, 1966, No. 4, pp. 97-101 (Russian); translated as *Cybernetics* 2, (1966), No. 4, pp. 78-81, 1968.

Egervary, E.

"Remarks on the Transportation Problem," *MTW.-MITT.*, Vol. 5, No. 5, pp. 278-284, 1958.

Elmaghraby, S. E.

"Sensitivity Analysis of Multiterminal Flow Networks," *Operations Res.*, Vol. 12, pp. 680-688, 1964.

"On Generalized Activity Networks," *J. Ind'l. Engrg.*, Vol. 17, No. 11, pp. 621-631, Nov. 1966.

"On the Expected Duration of PERT Type Networks," *Management Sci.*, Vol. 13, No. 5, pp. 299-306, 1967.

Elsapas, B., and Turner, J.

"Graphs with Circulant Adjacency Matrices," *J. Combinatorial Theory*, Vol. 9, pp. 297-307, 1970.

Engl, W. L., and Mlynski, D. A.

"Topological Synthesis Procedures for Circuit Integration," *IEEE Inter. Solid-State Circuits Conference*, Univ. of Penn., p. 139, 1969.

"Embedding a Graph in a Plane With Certain Constraints," *IEEE Trans. Circuit Theory*, Vol. CT-17, No. 2, pp. 250-252, May 1970.

Enomoto, H., and Ichikawa, T.

"An Optimizing Method for Embedding Linear Graphs in N-Cube," *Information and Control*, Vol. 17, pp. 122-144, 1970.

Erdey, M. R. A.

"Rectangular Diagrams in Graph Theory," *Proc. of 11th Midwest Symposium on Circuit Theory*, Univ. Notre Dame, Indiana, pp. 441-56, 1968.

Erdős, P.

"Remarks on a Theorem of Ramsey," *Bull. Res. Council Israel Sect. F*, Vol. 7F, pp. 21-24, 1957/58.

"On a Theorem of Rademacher-Turan," *Illinois J. Math.*, Vol. 6, pp. 122-127, 1962.

"On Circuits and Subgraphs of Chromatic Graphs," *Mathematika*, Vol. 9, pp. 170-175, 1962.

"Remarks on a Paper of Posa," *Magyar Tud. Akad. Mat. Kutato Int. Kozl.*, Vol. 7, pp. 227-229, 1962.

"On the Structure of Linear Graphs," *Israel J. Math.*, Vol. 1, pp. 156-160, 1963.

"On the Number of Triangles Contained in Certain Graphs," *Canad. Math. Bull.*, Vol. 7, pp. 53-56, 1964.

"Some Remarks on Ramseys Theorem," *Canad. Math. Bull.*, Vol. 7, pp. 619-622, 1964.

"Problems and Results in Chromatic Graph Theory," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 27-35, 1969.

"On the Number of Complete Subgraphs and Circuits Contained in Graphs," *Casopis Pest. Mat.*, Vol. 94, pp. 290-296, 1969.

"Some Applications of Graph Theory to Number Theory," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 77-82, 1969.

Erdős, P., and Hajnal, A.

"On Decompositions of Graphs," *Acta. Math. Acad. Sci. Hungar.*, Vol. 18, pp. 359-377, 1967.

Erdős, P., and Hanani, H.

"On a Limit Theorem in Combinatorial Analysis," *Publ. Math. Debrecen*, Vol. 10, pp. 10-13, 1963.

Erdős, P., and Renyi, A.

"On the Evolution of Random Graphs," *Bull. Inst. Internat. Stat.*, Vol. 38, pp. 343-347, 1961.

"Assymmetric Graphs," *Acta. Math. Acad. Sci. Hungar.*, Vol. 14, pp. 295-315, 1963.

"On the Existence of a Factor of Degree One of a Connected Random Graph," *Acta. Math. Acad. Sci. Hungar.*, Vol. 17, pp. 359-368, 1966.

Erdős, P., and Rogers, C. A.

"The Construction of Certain Graphs," *Canad. J. Math.*, Vol. 14, pp. 702-707, 1962.

Ermol'ev, Y. M.

"Shortest Admissible Paths I," *Cybernetics*, Vol. 2, No. 3, pp. 74-79, 1966.

Essam, J. W.

"Determination of Weight Factors in Linked-Cluster Expansions for Lattice Systems," *J. Mathematical Phys.*, Vol. 8, pp. 741-749, 1967.

Essam, J. W., and Fisher, M. E.

"Some Basic Definitions in Graph Theory," *Review of Modern Physics*, Vol. 42, No. 2, pp. 272-284, 1970.

Essam, J. W., and Sykes, M. F.

"Percolation Processes. I. Low-Density Expansion for the Mean Number of Clusters in a Random Mixture," *J. Mathematical Phys.*, Vol. 7, pp. 1573-1581, 1966.

Evans, T.

"A Decision Problem for Transformations of Trees," *Canad. J. Math.*, Vol. 15, pp. 584-590, 1963.

Everett, C. J.

"Basis and Chromatic Number of a Graph," *Canad. J. Math.*, Vol. 18, pp. 969-973, 1966.

Farber, L., and Malik, N. R.

"New Modification of Topological Formulas," *IEEE Trans. Circuit Theory*, Vol. CT-16, No. 1, pp. 89-91, Feb. 1969.

Farbey, B. A., Land, A. H., and Murchland, J. D.

"The Cascade Algorithm for Finding All Shortest Distances in a Directed Graph," *Management Sci.*, Vol. 14, pp. 19-28, Sep. 1967.

Feinberg, R. B.

"The Circular Dimension of a Graph," Rand Corporation, Report No. P-4489, 13 pp., Oct. 1970.

Federico, P. J.

"Some Simple Perfect 2×1 Rectangles," *J. Combinatorial Theory*, Vol. 8, pp. 244-246, 1970.

Fesser, L. J., and Feng, C. C.

"Flow Graphs and Boundary Value Problems," *J. Franklin Inst.*, Vol. 284, pp. 251-261, 1967.

Fiedler, M.

"Some Applications of the Theory of Graphs in Matrix Theory and Geometry," *Theory of Graphs and Its Applications (Proc. Symp. Smolenice, 1963)*, pp. 37-41, Publ. House Czechoslovak Acad. Sci., Prague, 1964.

"Graphs and Linear Algebra," *Proc. Symp. Rome*, pp. 131-134, 1966.

"Signed Distance Graphs," *J. Combinatorial Theory*, Vol. 7, pp. 136-149, 1969.

Fielder, D. C.

"Platonic Body Resistance Networks," *IEEE Trans. Education*, Vol. E-11, No. 4, pp. 254-255, Dec. 1968.

Firsov, V. V.

"Isometric Embedding of a Graph in a Boolean Cube," *Cybernetics*, Vol. 1, pp. 112-113, 1965.

Fishburn, P. C.

"An Interval Graph Is Not a Comparability Graph," *J. Combinatorial Theory*, Vol. 8, pp. 442-443, 1970.

Fisher, G. J.

"Computer Identification and Extraction of Planar Graphs," Eng. Sc.D. Thesis, Columbia U., 205 numb. leaves, 1965.

Fisher, M. E.

"On Hearing the Shape of a Drum," *J. Combinatorial Theory*, Vol. 1, pp. 105-125, 1966.

Fitilov, S. Ya., and Tseitin, G. S.

"Estimates of the Number of Syntactical Structures With Various Restrictions," *Cybernetics* (1966), Vol. 2, No. 6, pp. 68-76, 1969.

Floyd, R. W.

"Nondeterministic Algorithms," *J. Assoc. Comput. Mach.*, Vol. 14, pp. 636-644, 1967.

Folkman, J. H.

"An Upper Bound on the Chromatic Number of a Graph," Rand Corp. Report, RM-5808-PR, 35 pp., Feb. 1969.

"Graphs with Monochromatic Complete Subgraphs in Every Edge Coloring," *SIAM J. Appl. Math.*, Vol. 18, No. 1, p. 19, Jan. 1970.

Folkman, J., and Fulkerson, D. R.

"Subgraphs of Bipartite and Directed Graphs," Rand Corp. Report RM-5604-PR, Apr. 1968.

"Flows in Infinite Graphs," *J. Combinatorial Theory*, Vol. 8, pp. 30-44, 1970.

Foster, B. L.

"Short Proof of a Theorem of Rado On Graphs," *Proc. Amer. Math. Soc.*, Vol. 15, pp. 865-866, 1964.

Foulkes, H. O.

"On Redfield's Range-Correspondences," *Canad. J. Math.*, Vol. 18, pp. 1060-1071, 1966.

Frank, H.

"Optimum Locations on a Graph with Probabilistic Demands," *Operations Res.*, Vol. 14, pp. 409-421, 1966.

"Shortest Paths in Probabilistic Graphs," *Operations Res.*, Vol. 17, No. 4, pp. 583-599, 1969.

Frank, H., and Goldstein, M.

"On the Rank and Error-Correcting Capabilities of Some Graph-Theoretic Codes," *Proc. 1st Princeton Conf. on Information Sci. and Sys.*, Vol. 1, pp. 221-226, Mar. 1967.

Frazer, W. D.

"A Graph Theoretic Approach to Linear Codes," *Proc. Second Allerton Conf. Circuit and Systems Theory*, University of Illinois, Sept. 1964.

Frechen, J. B.

"On the Number of Cycles in Permutation Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 83-87, 1969.

Frink, O.

"A Proof of Petersen's Theorem," *Ann. of Math.*, pp. 491-492, 1926.

Frink, O., and Smith, P. A.

"Irreducible Non-planar Graphs," *Bull. Amer. Math. Soc.*, Vol. 36, p. 214, 1930.

Fu, Y.

"Applications of Topological Methods to Probabilistic Communication Networks," *IEEE Trans. Communications Technology*, Vol. CT-13, No. 3, pp. 301-307, Sep. 1965.

"On the Probabilistic Networks," *U. S. Government Research Report*, Document No. AD-438 497, 17 pp.

"Dominating Set and Converse Dominating Set of a Directed Graph," *Amer. Math. Monthly*, Vol. 75, pp. 861-863, 1968.

Fulkerson, D. R.

"Networks, Frames, and Blocking Systems," *Mathematics of the Decision Sciences*. Vol. II, Lectures in Applied Mathematics (G. B. Dantzig and A. F. Scott, eds.), pp. 303-334.

"Networks, Frames, Blocking Systems," Rand Corp. Report RM-5368-PR, May 1967.

"Blocking Polyhedra," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 93-112, 1970.

Fulkerson, D. R., and Gross, O. A.

"Incidence Matrices with the Consecutive Ones Property," *Bull. Amer. Math. Soc.*, Vol. 70, pp. 681-684, 1964.

"Incidence Matrices with the Consecutive 1's Property," *U. S. Gov. Res. and Dev. Repts.*, Vol. 67, p. 34, Jun. 1967.

Garg, R. C., and Kumar, S.

"The Shortest Connected Graph Through Dynamic Programming Technique," *Math. Mag.*, Vol. 41, pp. 170-173, 1968.

Gassner, B.

"Cycling in the Transportation Problem," *Naval Res. Logist. Quart.*, Vol. 11, pp. 43-58, 1964.

Gelernter, H.

"Machine Generated Problem-Solving Graphs," *Proc. Symp. Math. Theory & Automata*, N. Y., Apr. 1962; Wiley, 1963.

Geller, D. P.

"Connectivity in Digraphs," Michigan Univ., Rept. No. 08226-13-T, 21 pp., July 1969.

"Forbidden Subgraphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 37-47, 1969.

Geller, D. P., and Harary, F.

"Arrow Diagrams are Line Digraphs," *SIAM J. Appl. Math.*, Vol. 16, pp. 1141-1145, 1968.

Geller, D. P., and Hedetniemi, S.

"A Proof Technique in Graph Theory," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 49-59, 1969.

"A Note on a Category of Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 89-90, 1969.

Geller, D., and Manvel, B.

"Reconstruction of Cacti," *Canad. J. Math.*, Vol. 21, pp. 1345-1360, 1969.

Gerencsér, L., and Gyárfás, A.

"On Ramsey-Type Problems," *Ann. Univ. Sci. Budapest. Eotvos Sect. Math.*, Vol. 10, pp. 167-170, 1967.

Gewirtz, A.

"Graphs with Maximal Even Girth," Ph.D. Thesis, City Univ. N. Y., *Dis. Abs.*, Vol. 28, p. 1611-B, 1967.

Gewirtz, A., and Quintas, L. V.

"Connected Extremal Edge Graphs Having Symmetric Automorphism Group," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 223-228, 1969.

Gibbs, N. E.

"A Cycle Generation Algorithm for Finite Undirected Linear Graphs," *J. Assoc. Comput. Mach.*, Vol. 16, pp. 564-568, Oct. 1969.

"The Bandwidth of Graphs," Ph.D. Thesis, Purdue Univ., Lafayette, Ind., 1969.

Gibson, P.

"Generalized Permanents and Hafnians," Ph.D. Thesis, Univ. North Carolina, *Dis. Abs.*, Vol. 27, p. 4018B., 1967.

Gilbert, E. N., and Pollak, H. O.

"Steiner Minimal Trees," *SIAM J. Appl. Math.*, Vol. 16, pp. 1-29, 1968.

Gill, A., and Traiger, I. L.

"Computation of Optimal Paths in Finite Graphs," *Computing Methods in Optimization Problems*, Vol. 2, pp. 105-118, Sep. 1968.

Gilmore, P. C.

"Families of Sets with Faithful Graph Representations," *IBM Research Note*, Vol. NC-184, 1962.

Gilmore, P. C., and Gomory, R. E.

"A Solvable Case of the Traveling Salesman Problem," *Proc. Nat. Acad. Sci.*, Vol. 51, No. 2, pp. 178-181, Feb. 1964.

Give'on, Y.

"Lattice Matrices," *Information and Control*, Vol. 7, pp. 477-484, 1964.

Gomory, R. E.

"The Traveling Salesman Problem," *Proc. IBM Sci. Comput. Sympos. Comb. Prob.*, pp. 93-121, 1964; IBM Data Process. Div., White Plains, N. Y., 1966.

Gomory, R. E., and Hu, T. C.

"Synthesis of a Communication Network," *SIAM J. Appl. Math.*, Vol. 12, pp. 348-369, 1964.

Gonzales, R.

"Solution of the Salesman Problem by Dynamic Programming on the Hypercube," *MIT Op. Res. Ctr. Interim Tech. Rpt. N.*, Vol. 18, 1962.

Good, I. J.

"Normal Recurring Decimals," *J. London Math. Soc.*, Vol. 21, pp. 167-169, 1946.

Gordon, R. M.

"Checking for Loops in Networks," *Comm. ACM*, Vol. 6, p. 384, 1963.

Gorinshteyn, L. L.

"The Partitioning of Graphs," *Engrg. Cybernetics*, Vol. 1969, No. 1, pp. 76-82, 1969.

Grace, D. W.

"Computer Search for Non-Isomorphic Convex Polyhedra," Ph.D. Thesis, Computer Sc. Dept., Stanford University, 1965; Tech. Report C515, Jan. 1965.

Graver, J. E., and Yackel, J.

"An Upper Bound for Ramsey Numbers," *Bull. Amer. Math. Soc.*, Vol. 72, pp. 1076-1079, 1966.

Greenwell, D. L., and Hemminger, R. L.

"Reconstructing Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 91-114, 1969.

Groeneveld, J.

"The First Two Moments of the Complexity Distribution of Labelled Multigraphs and Graphs," *Inst. Theo. Fys. Univ. Amsterdam*, 1965.

"Estimation Methods for Mayers Graphical Expansions," *NATO Study Inst.*, pp. 229-259, 1967.

Grossman, J. W.

"Remarks on Cut-Sets," *J. Res. Nat. Bur. Standards Sect. B.*, Vol. 71B, pp. 183-186, 1967.

Grünbaum, B.

"Grotzschs Theorem on 3-Colorings," *Michigan Math. J.*, Vol. 10, pp. 303-310, 1963.

"A Simple Proof of a Theorem of Motzkin," *Nederl. Akad. Wetensch. Proc. Ser. A 67. Indag. Math.*, Vol. 26, pp. 382-384, 1964.

Convex Polytopes, Wiley (Interscience), New York, 1967.

"Graphs, Complexes, and Polytopes," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 85-90, 1969.

"Incidence Patterns of Graphs and Complexes," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 115-128, 1969.

"On n-Connected Graphs," *Math. Nachr.*, Vol. 39, pp. 345-347, 1969.

"Planar Maps with Prescribed Types of Vertices and Faces," *Mathematika*, Vol. 16, pp. 28-36, 1969.

"Higher-dimensional Analogs of the Four-color Problem and Some Inequalities for Simplicial Complexes," *J. Combinatorial Theory*, Vol. 8, pp. 147-153, 1970.

Grundy, P.

"Mathematics and Games," *Eureka*, Vol. 2, p. 6, 1939.

Grundy, P., and Smith, C.

"Disjunctive Games with the Last Player Losing," *Proc. Cambridge Philos. Soc.*, Vol. 52, pp. 527-533, 1956.

Guan, M.

"An Improved Graphic Method for Solving the Transportation Problem," *Sci. Sinica*, Vol. 13, pp. 173-183, 1964.

Gupta, R. P.

"Independence and Covering Numbers of Line Graphs and Total Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 61-62, 1969.

"Bounds on the Chromatic and Achromatic Numbers of Complementary Graphs," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 229-236, 1969.

Guy, R. K.

"The Coarseness of the Complete Graph," Research Paper No. 4, Dept. of Mathematics, University of Calgary, 15 pp., Dec. 1966.

"The Crossing Number of the Complete Graph," Research Paper No. 8, Dept. of Math, University of Calgary, 13 pp., Jan. 1967.

"The Decline and Fall of Zarankiewicz's Theorem," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 63-69, 1969.

"A Many-Faceted Problem of Zarankiewicz," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 129-148, 1969.

Guy, R. K., and Jenkyns, T. A.

"The Toroidal Crossing Number of $K_{m,n}$," Research Paper No. 39, Dept. of Math., Univ. of Calgary, 20 pp., 1968.

"The Toroidal Crossing Number of $K_{m,n}$," *J. Combinatorial Theory*, Vol. 6, pp. 235-250, 1969.

Guy, R. K., Jenkyns, T. A., and Schaer, J.

"The Toroidal Crossing Number of the Complete Graph," Research Paper No. 18, Dept. of Mathematics, University of Calgary, 20 pp., May 1967.

Guy, R. K., and Milner, E. C.

"Graphs Defined by Coverings of a Set," *Acta Math. Acad. Sci. Hungar.*, Vol. 19, pp. 7-21, 1968.

Hakimi, S. L., and Bredeson, J. G.

"Graph Theoretic Error-Correcting Codes," *IEEE Trans. Information Theory*, Vol. IT-14, No. 4, pp. 584-591, Jul. 1968.

"Ternary Graph Theoretic Error-Correcting Codes," *IEEE Trans. Information Theory*, Vol. IT-15, pp. 435-436, May 1969.

Hakimi, S. L., and Frank, H.

"Cut-set Matrices and Linear Codes," *IEEE Trans. Information Theory*, Vol. IT-11, pp. 457-458, Jul. 1965.

"Maximum Internally Stable Sets of a Graph," *J. Math. Anal. Appl.*, Vol. 25, pp. 296-308, 1969.

Halin, R.

"A Theorem on n-Connected Graphs," *J. Combinatorial Theory*, Vol. 7, pp. 150-154, 1969.

"On the Structure of n-Connected Graphs," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 91-102, 1969.

Hall, D. W., Siry, J. W., and Vanderslice, B. R.

"The Chromatic Polynomial of the Truncated Icosahedron," *Proc. Amer. Math. Soc.*, Vol. 16, No. 4, pp. 620-628, 1965.

Hamelink, R. C.

"Graph Theory and Lie Algebra," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 149-153, 1969.

Harary, F.

"A Graph Theoretical Approach to Similarity Relations," *Psychometrika*, Vol. 29, pp. 143-151, 1964.

"Recent Results in Topological Graph Theory," *Acta Math. Acad. Sci. Hungar.*, Vol. 15, pp. 405-412, 1964.

"On Minimally Non-Planar Graphs," *Ann. Univ. Sci. Budapest. Eötvös*, Vol. 8, pp. 13-15, 1965.

"Graph Theory and Theoretical Physics," (editor) Academic Press, N. Y., 1967.

"The Four Color Conjecture and Other Graphical Diseases," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 1-9, 1969.

"The Greek Alphabet of 'Graph Theory'," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 13-20, 1969.

Graph Theory, Addison-Wesley, Menlo Park, Calif., 1969.

"Determinants, Permanents and Bipartite Graphs," *Math. Mag.*, Vol. 42, pp. 146-148, 1969.

"On the Intersection Number of a Graph," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 71-72, 1969.

"Graph Theory as a Structural Model in the Social Sciences," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 1-16, 1970.

"Enumeration Under Group Action: Unsolved Graphical Enumeration Problems, IV," *J. Combinatorial Theory*, Vol. 8, pp. 1-11, 1970.

Harary, F., and Hedetniemi, S. T.

"The Achromatic Number of a Graph," *J. Combinatorial Theory*, Vol. 8, pp. 154-161, 1970.

Harary, F., Hedetniemi, S. T., and Robinson, R. W.

"Uniquely Colorable Graphs," *J. Combinatorial Theory*, Vol. 6, pp. 264-270, 1969.

Harary, F., Hill, A., and Westwick, R.

"Cubic Identity Graphs and Planar Graphs Derived from Trees," *J. Austral. Math. Soc.*, Vol. 11, Part 2, p. 207, May 1970.

Harary, F., and Kodama, Y.

"On the Genus of an N-Connected Graph," *Fund. Math.*, Vol. 54, pp. 7-18, 1963.

Harary, F., Mowshowitz, A., and Riordan, J.

"Labeled Trees with Unlabeled End-Points," *J. Combinatorial Theory*, Vol. 6, pp. 60-64, 1969.

Harary, F., and Palmer, E. M.

"Enumeration of Finite Automata," *Information and Control*, Vol. 10, pp. 499-508, 1967.

"On the Number of Balanced Signed Graphs," *Bull. Math. Biophys.*, Vol. 29, pp. 759-765, 1967.

"On the Automorphism Group of a Composite Graph," *Studia Sci. Math. Hungar.*, Vol. 3, pp. 439-441, 1968.

Harary, F., Palmer, E. M., and Read, R. C.

"The Number of Ways to Label a Structure," *Psychometrika*, Vol. 32, pp. 155-156, 1967.

Harary, F., and Tutte, W. T.

"On the Order of the Group of a Planar Map," *J. Combinatorial Theory*, Vol. 1, pp. 394-395, 1966.

Harary, F., and Welsh, D.

"Matroids Versus Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 155-170, 1969.

Harper, L. H.

"Optimal Assignment of Numbers to Vertices," *SIAM J. Appl. Math.*, Vol. 12, pp. 131-135, 1964.

"Optimal Numberings and Isoperimetric Problems on Graphs," *J. Combinatorial Theory*, Vol. 1, pp. 385-393, 1966.

Harris, B., and Schoenfeld, L.

"A Composition Theorem for the Enumeration of Certain Subsets of the Symmetric Semigroup," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 215-254, 1970.

Harrison, M. A.

"A Census of Finite Automata," *Canad. J. Math.*, Vol. 17, pp. 100-113, 1965.

Hayes, M.

"The Role of Activity Precedence Relationships in Node-oriented Networks," *Project Planning by Network Analysis*, pp. 128-146, 1969.

Heap, B. R., and Lynn, M. S.

"The Index of Primitivity of a Non-Negative Matrix," *Numer. Math.*, Vol. 6, pp. 120-141, 1964.

"The Structure of Powers of Non-negative Matrices. I. The Index of Convergence," *SIAM J. Appl. Math.*, Vol. 14, pp. 610-639, 1966.

"The Structure of Powers of Non-negative Matrices. II. The Index of Maximum Density," *SIAM J. Appl. Math.*, Vol. 14, pp. 762-777, 1966.

Hedetniemi, S. T.

"Some Interpolation Theorems for Partitions of Graphs," *U. S. Gov. Res. and Dev. Repts.*, Vol. 67, p. 103, May 25, 1967.

"On Minimum Walks in Graphs," *Naval Res. Logist. Quart.*, Vol. 15, pp. 453-458, 1968.

"On Classes of Graphs Defined by Special Cutsets of Lines," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 171-189, 1969.

Hedrlin, Z.

"On Endomorphisms of Graphs and Their Homomorphic Images," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 73-85, 1969.

Hedrlin, Z., and Pultr, A.

"Relations (Graphs) with Given Finitely Generated Semi-groups," *Monatsh. Math.*, Vol. 68, pp. 213-217, 1964.

"Symmetric Relations (Undirected Graphs) with Semi-group," *Monatsh. Math.*, Vol. 69, pp. 318-322, 1965.

Henn, R., and Künzi, H. P.

Introduction to Operations Research. I and II. Springer-Verlag, Berlin-Heidelberg-New York, 1968.

Hestenes, M. D.

"Rank 3 Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 191-192, 1969.

Higgs, D. A.

"Infinite Graphs and Matroids," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 245-254, 1969.

Hirayama, H., Watanabe, H., and Harada, K.

"Digital Determination of Trees in Network Topology," *Jour. Instit. of Electrical Commun. Engineers of Japan*, Vol. 46, No. 1, pp. 23-30, Jan. 1963.

Hobbs, A. M.

"Remarks on Network Simplification," *Operations Res.*, Vol. 15, pp. 548-551, 1967.

"A Survey of Thickness," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 255-264, 1969.

Hobbs, A. M., and Grossman, J. W.

"A Class of Thickness-Minimal Graphs," *J. Res. Nat. Bur. Standards Sect. B*, Vol. 72B, pp. 145-153, 1968.

"Thickness and Connectivity in Graphs," *J. Res. Nat. Bur. Stand.*, (Sec. B), Vol. 72B, pp. 239-244, 1968.

Hoffman, A. J.

"On the Line-Graph of the Complete Bipartite Graph," *Ann. Math. Statist.*, Vol. 35, pp. 883-885, 1964.

"Some Recent Results on Spectral Properties of Graphs," *Beitrag zur Graphentheorie*, pp. 75-80, 1968.

"The Eigenvalues of the Adjacency Matrix of a Graph," in *Combinatorial Mathematics and its Applications*, edited by R. C. Bose and T. C. Dowling, University of North Carolina Press, Chapel Hill, pp. 578-584, 1969.

"The Change in the Least Eigenvalue of the Adjacency Matrix of a Graph Under Imbedding," *SIAM J. Appl. Math.*, Vol. 17, No. 4, pp. 664-671, Jul. 1969.

"On Eigenvalues and Colorings of Graphs," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 79-91, 1970.

Hoffman, A. J., and Markowitz, H. M.

"A Note on the Shortest Path, Assignment, and Transportation Problems," *Naval Res. Logist. Quart.*, Vol. 10, pp. 375-379, 1963.

Hoffman, A. J., and Ostrowski, A. M.

"On the Least Eigenvalue of a Graph of Large Minimum Valence Containing a Given Graph," *Linear Algebra and Its Applications*, to appear.

Holt, A. W.

"A Mathematical and Applied Investigation of Tree Structures for Computer Syntactic Analysis," *U. S. Gov. Res. and Dev. Repts.*, Vol. 41, p. 27, Dec. 10, 1967.

Holt, A., and Fiedler, J.

"Efficient Tree-Generation Method Suitable for Computer Programming," *Electronic Letters*, Vol. 4, No. 10, pp. 183-184, May 1968.

Holt, R. C., and Reingold, E. M.

"On the Time Required to Detect Cycles and Connectivity in Directed Graphs," Dept. of Computer Science, Cornell Univ., Ithaca, N. Y., Technical Report No. 70-63, 6 pp., Jun. 1970.

Hooi-Tong, L.

"On a Class of Directed Graphs—With an Application to Traffic-Flow Problems," *J. of Operations Research Soc. of America*, Vol. 18, No. 1, pp. 87-94, 1970.

Hopcroft, J. E.

"An $n \log n$ Algorithm for Minimizing States in a Finite Automaton," Technical Report CS-190, Stanford University, 1970.

Hu, T. C.

"Multi-Terminal Shortest Paths," Oper. Res. Center, Univ. Cal., Berk., ORC 65-11, 1965.

Hu, T. C., and Torres, W. T.

"Shortcut in the Decomposition Algorithm for Shortest Paths in a Network," *IBM J. Res. Develop.*, Vol. 13, No. 4, pp. 387-390, July 1969.

Huffman, D. A.

"A Graph—Theoretic Formulation of Binary Group Codes," *Summary of Papers, International Conference on Microwaves, Circuit Theory and Information Theory*, Tokyo, pt. 3, pp. 29-30, 1964.

Husain, T.

Open Mapping and Closed Graph Theorems in Topological Vector Spaces, Oxford, 1965.

Ijiri, Y.

"On the Generalized Inverse of an Incidence Matrix," *SIAM J. Appl. Math.*, Vol. 13, No. 3, pp. 827-836, 1965.

Iri, M.

"Topological and Algebraical Theory and Methods of Transportation Networks," *RAAG Memoirs*, Vol. 36, pp. 472-494, 1962.

"On the Number of 2-Isomorphic Graphs," *RAAG Res. Notes*, Vol. 72, No. 3, 8 pp., 1963.

Network Flow, Transportation and Scheduling; Theory and Algorithms, Academic Press, N. Y., 1969.

Ivanescu, P. L.

"Pseudo-Boolean Programming with Special Restraints, Applications to Graph Theory," *Elektron. Informationsverarbeitung. Kybernetik.*, Vol. 1, pp. 165-183, 1965.

Ivanescu, P. L., Hammer, P. L., and Rudeanu, S.

"A Pseudo-Boolean Viewpoint on Systems of Representatives," *Zastos. Mat.*, Vol. 10, pp. 135-142, 1969.

Ivanescu, P. L., and Rosenberg, I.

"Applications of Pseudo-Boolean Programming to the Theory of Graphs," *Z. Wahrscheinlichkeitstheorie und Verw. Gahiete.*, Vol. 3, pp. 163-174, 1964.

Jackson, D. E., and Entringer, R. C.

"Enumeration of Certain Binary Matrices," *J. Combinatorial Theory*, Vol. 8, pp. 291-298, 1970.

Jakubowski, R.

"An Algorithm for the Simulation of Dynamical Systems by Means of Digital Computers, Based on Signal-Flow Graphs," *J. Math. Anal. Appl.*, Vol. 22, pp. 172-187, 1968.

Jambotkar, C. G., and Tokad, Y.

"Realization of n th-Order Matrices With Two-Tree Port Structures," *J. Franklin Inst.*, Vol. 288, No. 4, pp. 245-260, Oct. 1969.

Jean, M.

"An Interval Graph is a Comparability Graph," *J. Combinatorial Theory*, Vol. 7, pp. 189-190, 1969.

"Line-Symmetric Tournaments," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 265-272, 1969.

Jenkyins, T. A., and Nash-Williams, C. St. J. A.

"Counterexamples in the Theory of Well-Quasi-Ordered Sets," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 87-91, 1969.

Jewell, W. S.

"Divisible Activities in Critical Path Analysis," *Operations Res.*, Vol. 13, pp. 747-760, 1965.

Johnson, D. M., Dulmage, A. L., and Mendelsohn, N. S.

"Connectivity and Reducibility of Graphs," *Canad. J. Math.*, Vol. 14, pp. 529-539, 1962.

Joksch, H. C.

"The Shortest Route Problem with Constraints," *J. Math. Anal. Appl.*, Vol. 14, pp. 191-197, 1966.

Jones, F. B., and Thomas, E. S., Jr.

"Connected G-Delta Graphs," *Duke Math. J.*, Vol. 33, pp. 341-346, 1966.

Jump, J. R.

"A Note on the Iterative Decomposition of Finite Automata," *Information and Control*, Vol. 15, No. 5, pp. 424-435, Nov. 1969.

Kalbfleisch, J. G.

"Chromatic Graphs and Ramseys Theorem," Ph.D. Thesis, Univ. Waterloo, 1966.

"On An Unknown Ramsey Number," *Michigan Math. J.*, Vol. 13, pp. 385-392, 1966.

"A Uniqueness Theorem for Edge-Chromatic Graphs," *Pacific J. Math.*, Vol. 21, pp. 503-509, 1967.

"Upper Bounds for Some Ramsey Numbers," *J. Combinatorial Theory*, Vol. 2, pp. 35-42, 1967.

"On the Ramsey Number $N(4, 4; 3)$," *Recent Progress in Combinatorics (Proc. Third Waterloo Conf. on Combinatorics, 1968)*, Academic Press, New York, pp. 273-282, 1969.

Kalninsch, Ya.

"The Number of Ways of Coloring the Branches of a Tree and a Multitree," *Cybernetics*, Vol. 1, pp. 114-116, 1965.

Kalyayev, A. V., Dvoryantsev, Yu. A., and Melikhov, A. N.

"Methods of Graph Theory in Synthesis of Potential Systems," *Eng. Cybernetics*, Vol. 4, pp. 62-67, 1965.

Kamae, T.

"On Generation of Trees Along Hamilton Circuit in Tree Graph," *Electronics & Communications in Japan*, Vol. 51, No. 2, pp. 18-23, Feb. 1968.

Karp, R. M., and Miller, R. E.

"Properties of a Model for Parallel Computations: Determinacy, Termination, Queueing," *SIAM J. Appl. Math.*, Vol. 14, pp. 1390-1411, 1966.

Karp, R. M., Miller, R. E., and Windgrad, S.

"The Organization of Computations for Uniform Recurrence Equations," *J. Assoc. Comput. Mach.*, Vol. 14, pp. 563-590, 1967.

Kasai, T.

"A Group of Incomplete Graphs," *Bull. Univ. Osaka Prefecture Ser. A*, Vol. 17, No. 1, pp. 107-111, 1968.

"New Group of Incomplete Graphs," *Electronics & Communications in Japan*, Vol. 51, No. 5, pp. 43-44, May 1969.

Kasai, T., Matsui, K., Kusaka, H., Yoneda, S., and Taki, I.

"A Method for the Expansion of Tree Determinants in Incomplete Graphs and the Expressions of Their Expanded Formulas by the Continuants," *Bull. Univ. Osaka Prefecture Ser. A*, Vol. 15, No. 1, pp. 85-95, 1966.

Kasami, T.

"A Topological Approach to Construction of Group Codes," *J. Inst. Electron. Commun. Engrs. (Japan)*, Vol. 44, pp. 1316-1321, Sept. 1961.

Katz, L.

"Probability of Indecomposability of a Random Mapping Function," *Ann. Math. Statist.*, Vol. 26, pp. 512-517, 1955.

Kaufman, A.

Graphs, Dynamic Programming and Finite Games, Academic Press, 1967.

Kautz, W. H., and Turner, J.

"Universal Connecting Networks and Synthesis of Canonical Sequential Circuits," *IEEE 9th Annual Symposium on Switching & Automata Theory*, Schenectady, N. Y., pp. 257-268, Oct. 1968.

Kay, D., and Chartrand, G.

"A Characterization of Certain Ptolemaic Graphs," *Canad. J. Math.*, Vol. 17, pp. 342-346, 1965.

Kelly, P.

"On Some Mappings Related to Graphs," *Pacific J. Math.*, Vol. 14, pp. 191-194, 1964.

Kempe, A. B.

"On the Geographical Problem of Four Colors," *Amer. J. Math.*, Vol. 2, pp. 193-204, 1879.

Kendall, D. G.

"Incidence Matrices, Internal Graphs, and Seriation in Archeology," *Pacific J. Math.*, Vol. 28, pp. 565-570, 1969.

Kendall, M. G., and Smith, B. B.

"On the Method of Paired Comparisons," *Biometrika*, Vol. 31, pp. 324-345, 1940.

Kernighan, B. W., and Lin, S.

"An Efficient Heuristic Procedure for Partitioning Graphs," *Bell System Tech. J.*, Vol. 49, No. 2, pp. 291-307, Feb. 1970.

King, C.

"Characteristic Polynomials of 7-point Graphs," *Scientific Report UWI/CC 6*, Univ. of the West Indies, Kingston, 1967.

Kiryukhin, V. V.

"Optimum Communication Structures in Communication Networks," *Problems of Information Transmission*, Vol. 1, No. 2, pp. 72-76, 1965.

Kishi, G., and Kajitani, Y.

"Generation of Hamilton Circuits in Tree Graphs," *Electron. Commun. Engrs. (Japan)*, Vol. 50, No. 12, pp. 40-47, 1967.

"Maximally Distinct Trees in a Linear Graph," *Electronics & Communications in Japan*, Vol. 51, No. 5, pp. 35-42, May 1968.

"Maximally Distant Trees and Principal Partition of Linear Graph," *IEEE Trans. Circuit Theory*, Vol. CT-16, No. 3, pp. 323-330, Aug. 1969.

Klarner, D. A.

"The Number of k-Coloured Graphs," *Canad. J. Math.*, Vol. 20, pp. 1344-1352, 1968.

"A Correspondence Between Two Sets of Trees," *Nederl. Akad. Wetensch. Proc. Ser. A 72=Indag. Math.*, Vol. 31, pp. 292-296, 1969.

Klee, V. L., Jr.

"A Property of D-Polyhedral Graphs," *J. Math. Mech.*, Vol. 13, pp. 1039-1042, 1964.

"Diameters of Polyhedral Graphs," *Canad. J. Math.*, Vol. 16, pp. 602-614, 1964.

"A Method for Constructing Circuit Codes," *J. Assoc. Comput. Mach.*, Vol. 14, pp. 520-528, Jul. 1967.

"Greedy Algorithm for Finitary and Cofinitary Matroids," *Mathematical Note 604*, Boeing Co., Math. Research Laboratory, 31 pp., May 1969.

"Some Unsolved Problems Concerning Convex Bodies," *Mathematical Note 620*, Boeing Co., Math. Research Laboratory, 29 pp., Sept. 1969.

"The Use of Circuit Codes in Analog-to-Digital Conversion," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 121-131, 1970.

Kleitman, D., Martin-Löf, A., Rothschild, B., and Whinston, A.

"A Matching Theorem for Graphs," *J. Combinatorial Theory*, Vol. 8, pp. 104-114, 1970.

Kotzig, A.

"Coloring of Trivalent Polyhedra," *Canad. J. Math.*, Vol. 17, pp. 659-664, 1965.

"Moves Without Forbidden Transitions in a Graph," *Mat. Časopis Sloven. Akad. Vied.*, Vol. 18, pp. 76-80, 1968.

Krasnushkin, P. E.

"Evolution Graphs and Their Application to Investigation and Solution of Systems of Linear Equations," *Soviet Physics Dokl.*, Vol. 10, pp. 1138-1141, 1966.

Kron, G.

"Graphs as Illegitimate Models of Electrical Networks," *Matrix Tensor Quart.*, Vol. 12, pp. 1-10, 1961/62.

"Camouflaging Electrical 1-Networks as Graphs," *Quart. Appl. Math.*, Vol. 20, pp. 161-174, 1962/63.

Kronk, H. V.

"An Analogue to the Heawood Map-Colouring Problem," *J. London Math. Soc.*, Vol. 1, No. 2, pp. 750-752, 1969.

"Generalization of a Theorem of Pósa," *Proc. Amer. Math. Soc.*, Vol. 21, pp. 77-78, 1969.

"Is the Square of Every Nonseparable Graph Hamiltonian?," *Amer. Math. Monthly*, Vol. 76, No. 9, pp. 1045-1046, Nov. 1969.

"A Note on k-path Hamiltonian Graphs," *J. Combinatorial Theory*, Vol. 7, pp. 104-106, 1969.

"Variations on a Theorem of Pósa," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 193-197, 1969.

Kuhn, H. W.

"Approximate Search for Fixed Points," *Computing Methods in Optimization Problems*, Vol. 2, pp. 199-211, 1968.

Kuich, W., and Sauer, N.

"On the Existence of Certain Minimal Regular n-Systems with Given Girth," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 93-101, 1969.

Kurata, R.

"Primal Dual Method of Parametric Programming and Iris Theory on Network Flow Problems," *J. Operations Res. Soc. Japan*, Vol. 7, pp. 104-144, 1965.

Kurepa, D.

"On Reflexive Symmetric Relations and Graphs," *Razpr. Slov. Akad. Znan. In Umfth. Razred Mat. Fiz. in Tehn. Vede*, Vol. A4, No. 4, p. 28, 1953.

Kurtzberg, J. M.

"On Approximation Methods for the Assignment Problem," *J. Assoc. Comput. Mach.*, Vol. 9, pp. 419-439, 1962.

Lal, M.

"Directed Hamilton Circuits," *IEEE Trans. Circuit Theory*, Vol. CT-14, pp. 356-357, 1967.

Laskar, R.

"Eigenvalues of the Adjacency Matrix of Cubic Lattice Graphs," *Pacific J. Math.*, Vol. 29, pp. 623-629, 1969.

Lawler, E. L.

"Electrical Assemblies with a Minimum Number of Interconnections," *IEEE Trans. Electronic Computers*, Vol. EC-11, pp. 86-88, 1962.

Leake, R. J., and Althaus, H. L.

"Minimum Vertex Potential Principle," *IEEE Trans. Circuit Theory*, Vol. CT-15, pp. 82-83, 1968.

Lederberg, J.

"Hamilton Circuits of Convex Trivalent Polyhedra," *Amer. Math. Monthly*, Vol. 74, pp. 522-527, 1967.

Lee, S.

"On Topological Formulae," *Proc. First Annual Allerton Conf. on Circuit and Systems Theory*, pp. 427-455, 1963.

Leech, J.

"Seven Region Maps on a Torus," *Math. Gaz.*, Vol. 39, pp. 102-105, 1955.

Leggett, J. D., and Bedrosian, S. C.

"On Networks with Maximum Number of Trees," *Midwest Symposium on Circuit Theory, 8th Proc.*, Colorado State Univ., Jun. 1965.

Lehman, A.

"A Solution of the Shannon Switching Game," *SIAM J. Appl. Math.*, Vol. 12, pp. 687-725, 1964.

"Wye-Delta Transformations in Probabilistic Networks," *SIAM J. Appl. Math.*, Vol. 11, pp. 773-805, 1963.

Lempel, A.

"On k-Stable Feedback Shift Registers," *IEEE Trans. Computers*, Vol. C-18, pp. 652-660, Jul. 1969.

"On a Homomorphism of the de Bruijn Graph and Its Applications to the Design of Feedback Shift Registers," *IEEE Trans. on Computers*, Vol. C-19, No. 12, pp. 1204-1209, Dec. 1970.

Lerda, F., and Majorani, E.

"An Algorithm for Connecting N Points with a Minimum Number of Crossings," *Calcolo*, Vol. 1, pp. 257-265, 1964.

Levin, B. M., and Hedetniemi, S. T.

"Determining Fastest Routes Using Fixed Schedule," *AFIPS Proc. SJCC*, pp. 1-5, 1963.

Lewin, M.

"Essential Coverings of Matrices," *Proc. Cambridge Philos. Soc.*, Vol. 67, pp. 263-267, 1970.

Lick, D. R.

"A Sufficient Condition for Hamiltonian Connectedness," *J. Combinatorial Theory*, Vol. 8, pp. 444-445, 1970.

"Critically and Minimally n-Connected Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 199-205, 1969.

Liebnitz, P. W., Jr.

"Neighborhood Extensions of Continuous Maps," *J. Reine Angew. Math.*, Vol. 222, pp. 58-68, 1966.

Lin, Y.-F.

"A Problem of Bosák Concerning the Graphs of Semigroups," *Proc. Amer. Math. Soc.*, Vol. 21, pp. 343-346, 1969.

Lin, Y. F., and Ratti, J. S.

"Connectivity of the Graphs of Semirings: Lifting and Product," *Proc. Amer. Math. Soc.*, Vol. 24, No. 2, pp. 411-414, Feb. 1970.

Lindstrom, B.

"Determinants on Semilattices," *Proc. Amer. Math. Soc.*, Vol. 20, pp. 207-208, 1969.

Loev, D.

"Theoretical Foundations for Neighbor-Listing Algorithms," Ph.D. Thesis, Univ. Penn., *Dis. Abs.*, Vol. 28, p. 1617-B, 1967.

Lovász, L.

"Graphs and Set Systems," *Beiträge zur Graphentheorie, (Kolloquium, Manebach, 1967)*, Teubner, Leipzig, pp. 99-106, 1968.

"Subgraphs With Prescribed Valencies," *J. Combinatorial Theory*, Vol. 8, pp. 391-416, 1970.

Lowe, T. C.

"Automatic Segmentation of Cyclic Program Structures Based on Connectivity and Processor Timing," *Comm. ACM*, Vol. 13, No. 1, pp. 3-6, 9, Jan. 1970. (Comment on above by Sattley, K., and Millstain, R., *Comm. ACM*, Vol. 13, No. 7, pp. 450-451, Jul. 1970.)

Lunnon, W. F.

"A Postage Stamp Problem," *Computer J.*, Vol. 12, No. 4, pp. 377-380, Nov. 1969.

L'Vovskii, L. S.

"Use of Graphs for Synthesizing Finite Automata," *Automation & Remote Control*, Vol. 26, No. 5, pp. 832-842, May 1965.

Luxemburg, W.

"A Remark on a Paper by de Bruijn and Erdős," *Nederl. Akad. Wetensch. Proc. Ser. A 65 Indag. Math.*, Vol. 24, pp. 343-345, 1962.

MacCrimmon, K. R., and Ryavec, C. A.

"An Analytic Study of the Pert Assumptions," *Operations Res.*, Vol. 12, No. 1, pp. 16-37, 1964.

Malec, M., and Skupien, Z.

"On the Maximal Planar Graphs and the Four Colour Problem," *Prace Mat.*, Vol. 12, pp. 205-209, 1969.

Manas, M., and Nedoma, J.

"Finding All Vertices of a Convex Polyhedron," *Numer. Math.*, Vol. 12, pp. 226-229, Oct. 1968.

Mann, W. C., and Jensen, P. A.

"A Data Structure for Directed Graphs in Man-machine Processing," Computer Command & Control Co., AD-636251, 76 pp., Jun. 1966.

Manna, Z.

"Termination of Algorithms," Ph.D. Dissertation, Carnegie-Mellon Univ., Pittsburgh, Pa., 1968.

Manvel, B.

"Reconstruction of Unicyclic Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 103-107, 1969.

"Reconstruction of Trees," *Canad. J. Math.*, Vol. 22, No. 1, p. 55, 1970.

"On Reconstruction of Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 207-214, 1969.

Marica, J. G., and Bryant, S. J.

"Unary Algebras," *Pacific J. Math.*, Vol. 10, pp. 1347-1359, 1960.

Marimont, R. B.

"System Connectivity and Matrix Properties," *Bull. Math. Biophys.*, Vol. 31, pp. 255-274, 1969.

Martin, D. F., and Estrin, G.

"Path Length Computations on Graph Models of Computations," *IEEE Trans. Computers*, Vol. C-18, No. 6, pp. 530-536, Jun. 1969.

Martin, J. J.

"Distribution of the Time Through a Directed, Acyclic Network," *Oper. Res.*, Vol. 13, No. 1, pp. 46-66, 1965.

Matula, D. W.

"The Cohesive Strength of Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 215-221, 1969.

Matyushkov, V.

"The Investigation of Recurrently Defined Information About Graphs," *Cybernetics*, Vol. 1, pp. 96-101, 1965.

May, K. O.

"The Origin of the Four-color Conjecture," *Isis*, Vol. 56, pp. 346-348, 1965.

Mayeda, W.

"Elementary Complete Tree Transformation," *U. S. Gov. Res. and Dev. Repts.*, Vol. 41, p. 44(A), Feb. 1966.

"Graph Theoretical Network Analysis Using New Equivalent Transformations," *Electronics & Communications in Japan*, Vol. 50, No. 7, pp. 121-127.

Mayeda, W., and Ramamoorthy, C.

"Distinguishability Criteria in Oriented Graphs and Its Application to Computer Diagnosis," Technical Memo, Report No. TM-6, Texas Univ., Austin, Texas, Electronics Research Center, 23 pp., Feb. 1969.

McAndrew, M. H.

"On the Product of Directed Graphs," *Proc. Amer. Math. Soc.*, Vol. 14, pp. 600-606, 1963.

"The Polynomial of a Directed Graph," *Proc. Amer. Math. Soc.*, Vol. 16, pp. 303-309, 1965.

McIlroy, M. D.

"Algorithm 354 Generator of Spanning Trees (H)," *Comm. ACM*, Vol. 12, No. 9, pp. 511-513, September 1969.

McMillan, D. R., Jr.

"Local Properties of the Embedding of a Graph in a Three-Manifold," *Canad. J. Math.*, Vol. 18, pp. 517-528, 1966.

Medvedev, G. N.

"Analysis of Discrete Markov Systems by Means of Stochastic Graphs," *Automat. Remote Control*, Vol. 26, pp. 481-487, 1965.

Meetham, A. R.

"Algorithm to Assist in Finding the Complete Sub-graphs of a Given Graph," *Nature*, Vol. 211, p. 105, July 1966.

Meir, A., and Moon, J. W.

"On Nodes of Degree Two in Random Trees," *Mathematika*, Vol. 15, pp. 188-192, 1968.

"The Distance Between Points in Random Trees," *J. Combinatorial Theory*, Vol. 8, pp. 99-103, 1970.

Melikov, A. N., Bershtein, I. S., and Karelin, V. P.

"Decomposition of Graphs and Finite Automata," *Eng. Cybernetics*, No. 2, pp. 109-117, 1968.

"Isomorphism of Graphs and Finite Automata," *Eng. Cybernetics*, No. 1, pp. 124-129, 1968.

Menon, V. V.

"The Isomorphism Between Graphs and Their Adjoint Graphs," *Canad. Math. Bull.*, Vol. 8, pp. 7-15, 1965.

"A Redistribution Problem," *Cahiers Centre Études Recherche Oper.*, Vol. 7, pp. 24-35, 1965.

Mesner, D. M., and Watkins, M. E.

"Some Theorems About N-Vertex Connected Graphs," *J. Math. Mech.*, Vol. 16, pp. 321-326, 1966.

Miller, D. J.

"The Automorphism Group of a Product of Graphs," *Proc. Amer. Math. Soc.*, Vol. 25, No. 1, p. 24, May 1970.

"Weak Cartesian Product of Graphs," *Colloquium Mathematicum*, Vol. 21, No. 1, pp. 55-74, 1970.

Miller, J. C. P.

"Periodic Forests of Stunted Trees: The Identification of Distinct Forests," *Computers in Mathematical Research*, North-Holland, Amsterdam, pp. 149-167, 1968.

Mills, G.

"A Decomposition Algorithm for the Shortest Route Problem," *Operations Res.*, Vol. 14, pp. 279-291, 1966.

Mills, W. H.

"Some Complete Cycles on the N-Cube," *Proc. Amer. Math. Soc.*, Vol. 14, pp. 640-643, 1963.

Mirsky, L., and Perfect, H.

"Systems of Representatives," *J. Math. Anal. Appl.*, Vol. 15, pp. 520-568, 1966.

"Applications of the Notion of Independence to Problems of Combinatorial Analysis," *J. Combinatorial Theory*, Vol. 2, pp. 327-357, 1967.

Mitchell, P.

"The Signal Flow Graph," *Cornell Engr.*, Vol. 27, No. 6, pp. 15-18, 1962.

Mitchem, J.

"Hypo-Properties in Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 223-230, 1969.

Mohanty, S. G., and Handa, B. R.

"On Lattice Paths with Several Diagonal Steps," *Canad. Math. Bull.*, Vol. 11, pp. 537-545, 1968.

Moon, J. W.

"On the Line-Graph of the Complete Bigraph," *Ann. Math. Statist.*, Vol. 34, pp. 664-667, 1963.

"On Extremal Graphs Containing No Wheels," *Acta. Math. Acad. Sci. Hungar.*, Vol. 16, pp. 13-18, 1965.

"On the Maximum Degree in a Random Tree," *Michigan Math. J.*, Vol. 15, pp. 429-432, 1968.

"Counting Labelled Trees, A Survey of Methods and Results," A Publication of Department of Mathematics of the University of Alberta, 1969.

"Connected Graphs with Unlabelled End-Points," *J. Combinatorial Theory*, Vol. 6, pp. 65-66, 1969.

"The Number of Labelled k-Trees," *J. Combinatorial Theory*, Vol. 6, pp. 196-199, 1969.

"Some Mapping Problems for Tournaments," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 133-148, 1970.

Moon, J. W., and Moser, L.

"On Hamiltonian Bipartite Graphs," *Israel J. Math.*, Vol. 1, pp. 163-165, 1963.

"Simple Paths on Polyhedra," *Pacific J. Math.*, Vol. 13, pp. 629-631, 1963.

Moon, J. W., and Pullman, N. J.

"On Generalized Tournament Matrices," *SIAM Review*, Vol. 12, No. 3, pp. 384-399, July 1970.

Moore, E. F., and Shannon, C. E.

"Reliable Circuits Using Less Reliable Relays," Parts I and II, *J. Franklin Inst.*, Vol. 262, pp. 191-208, 281-297, 1956.

Morrison, D. R.

"Matching Algorithms," *J. Combinatorial Theory*, Vol. 6, pp. 20-32, 1969.

Mowshowitz, A.

"The Group of a Graph Whose Adjacency Matrix Has All Distinct Eigenvalues," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 109-110, 1969.

Moyles, D. M., and Thompson, G. L.

"An Algorithm for Finding a Minimum Equivalent Graph of a Digraph," *J. Assoc. Comput. Mach.*, Vol. 16, No. 3, pp. 455-460, July 1969.

Müller-Merbach, H.

"Some Connections Between Graph Theory and Network Analysis," *Project Planning by Network Analysis*, pp. 95-105, 1969.

Mullineux, N., and Reed, J. R.

"The Trunk in the Topology of Electrical Networks," *J. Franklin Inst.*, Vol. 281, pp. 188-197, 1966.

Murdoch, J. B.

Network Theory, McGraw-Hill, New York, 1970.

Murty, U. S. R.

"Extremal Nonseparable Graphs of Diameter 2," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 111-118, 1969.

Mustonen, S.

"On Distance Distribution in Networks," *Commentationes Physico-Mathematicae*, No. 8, Series 29 (Societas Scientiarum Fennica, Helsinki, Finland), 48 pp., 1964.

Myers, B. R.

"Algebraic Determination of Vertex Cutsets in Graph," *Instn. Elec. Engrs. Proc.*, Vol. 116, No. 4, pp. 510-512, Apr. 1969.

Nagle, J. F., and Temperley, H. N. V.

"Combinatorial Theorem for Graphs on a Lattice," *J. Math. and Phys.*, Vol. 9, pp. 1020-1026, 1968.

Nance, D. W.

"An Extension of Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 231-236, 1969.

Nash-Williams, C. St. J. A.

"On Well-Quasi-Ordering Finite Trees," *Proc. Camb. Phil. Soc.*, Vol. 59, pp. 833-835, 1963.

"On Well-Quasi-Ordering Lower Sets of Finite Trees," *Proc. Cambridge Philos. Soc.*, Vol. 60, pp. 369-384, 1964.

"Well-Balanced Orientations of Finite Graphs and Unobstrusive Odd-Vertex-Pairings," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 133-150, 1969.

"Hamilton Circuits in Graphs and Digraphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 237-243, 1969.

Nathan, A.

"Simple Derivation of Topological Rules for Signal Flow Graphs," *Nat. Convention of Electrical and Electronics Engrs. in Israel, 6th Proc.*, pp. 356-360, 1968.

Neuman, F.

"On a Certain Ordering of the Vertices of a Tree," *Casopis Pest. Mat.*, Vol. 89, pp. 323-339, 1964.

Neuwirth, L.

"Imbedding in Low Dimensions," *Illinois J. Math.*, Vol. 10, pp. 470-478, 1966.

Nemirovskiy, A. M.

"Identification of Simple Elementary Paths of Antisymmetric Graphs," *Engineering Cybernetics*, Vol. 1968, No. 3, pp. 49-54, 1969.

Nievergelt, J., and Faiman, M.

Computer Graphics, Univ. of Ill., 1969.

Nordhaus, E. A.

"A Class of Strongly Regular Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 119-123, 1969.

"On the Density and Chromatic Numbers of Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 245-249, 1969.

Nystuen, J. D., and Dacey, M. F.

"A Graph Theory Interpretation of Nodal Regions," *Papers and Proc. of the Regional Sci. Assoc.*, Vol. 7, pp. 29-42, 1961.

O'Brien, T.

"Expansive Homeomorphisms on Compact Manifolds," *Proc. Amer. Math. Soc.*, Vol. 24, No. 4, p. 767, Apr. 1970.

O'Neil, P. V.

"Ulam's Conjecture and Graph Reconstructions," *Amer. Math. Monthly*, Vol. 77, No. 1, pp. 35-43, Jan. 1970.

"Enumeration of Spanning Trees in Certain Graphs," *IEEE Trans. Circuit Theory*, Vol. CT-17, p. 250, May 1970.

Obruca, A. K.

"Correspondence Between Two Types of Trees," *Computer J.*, Vol. 10, pp. 290-292, 1967.

Okada, S., Liss, D., and Kolker, R.

"Algebraic Techniques of Path Finding and Minimum Path Finding in Graphs," *U. S. Gov. Research Repts.*, No. AD-407 791, 29 pp., May 1963.

Onodera, R.

"On Signed Tree-Graphs and Cotree-Graphs," *RAAG Res. Notes*, Vol. 3, No. 133, 29 pp., 1968.

Onodera, R., and Mizuma, T.

"Enumeration of the Number of Trees or Cotrees and Its Application to Network Analysis," *RAAG Res. Notes* (3), No. 127, 59 pp., 1968.

Ore, O., and Plummer, M. D.

"Cyclic Coloration of Plane Graphs," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 287-294, 1969.

Ore, O., and Stemple, J.

"Numerical Calculations on the Four-Color Problem," *J. Combinatorial Theory*, Vol. 8, pp. 65-78, 1970.

Owens, A. B.

"Graph and Printed Circuit Imbeddings—A Survey and Bibliography," Naval Research Laboratory, Bibliography No. 33, Wash., D. C., 24 pp., May 1, 1969.

"On Determining the Minimum Number of Multiple Edges for an Incidence Sequence," *SIAM J. Appl. Math.*, Vol. 18, No. 1, pp. 238-240, Jan. 1970.

Palais, R. S.

"When Proper Maps are Closed," *Proc. Amer. Math. Soc.*, Vol. 24, No. 4, p. 835, Apr. 1970.

Palásti, I.

"On the Distribution of the Number of Trees Which are Isolated Subgraphs of a Chromatic Random Graph," *Magyar Tud. Akad. Mat. Kutató Int. Kozl.*, Vol. 6, pp. 405-409, 1961.

Palmer, E. M.

"The Exponentiation Group as the Automorphism Group of a Graph," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 125-131, 1969.

"On the Number of Labeled 2-Trees," *J. Combinatorial Theory*, Vol. 6, pp. 206-207, 1969.

"Methods for the Enumeration of Multigraphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 251-261, 1969.

Pandit, S. N. N.

"Minaddition and an Algorithm to Find the Most Reliable Paths in a Network," *IRE Trans. Circuit Theory*, Vol. CT-9, pp. 190-191, 1962.

Parkin, R. E.

"A State Variable Method of Circuit Analysis Based on a Nodal Approach," *Bell System Tech. J.*, Vol. 47, pp. 1957-1970, Nov. 1968.

Parris, R.

"The Coding Problem for Graphs," M.Sc. Thesis, University of the West Indies, 1968.

Parris, R., and Read, R. C.

"Graph Isomorphism and the Coding of Graphs," Scientific Report UWI/CC3, University of the West Indies Computing Centre, 1967.

Paton, K.

"An Algorithm for Finding a Fundamental Set of Cycles of a Graph," *Comm. ACM*, Vol. 12, No. 9, pp. 514-518, Sep. 1969.

Payne, S. E.

"A Bruck-Ryser Type Non-existence Theorem," *Bull. Amer. Math. Soc.*, Vol. 74, p. 922, 1968.

Payne, S. E., and Tinsley, M. F.

"On $v_1xv_2(n,s,t)$ Configurations," *J. Combinatorial Theory*, Vol. 7, pp. 1-14, 1969.

Peck, J., and Williams, M.

"Examination Scheduling," *Comm. ACM*, Vol. 9, pp. 433-434, Jun. 1966.

Pennington, A. J.

"Conditions on Structure Matrices of n-Port, Immittance-Equivalent Electric Networks," *IEEE Trans. Circuit Theory*, Vol. CT-12, No. 4, pp. 536-540, Dec. 1965.

Picard, C.

The Theory of Questionnaires, Gauthier-Villars, Paris, France, 126 pp., 1965.

Pippert, R. E., and Beineke, L. W.

"Characterizations of 2-Dimensional Trees," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 263-270, 1969.

Plummer, M. D.

"On the Theory of Graphical Coverings," Ph.D. Thesis, Univ. Mich., *Dis. Abs.*, Vol. 27, p. 2449-B., 1967.

"On Minimal Blocks," *Trans. Amer. Math. Soc.*, Vol. 134, pp. 85-94, 1968.

"Some Covering Concepts in Graphs," *J. Combinatorial Theory*, Vol. 8, pp. 91-98, 1970.

Ponstein, J.

"A New Proof of Brooks' Chromatic Number Theorem for Graphs," *J. Combinatorial Theory*, Vol. 7, pp. 255-257, 1969.

Pototchi, A.

"A Simple Algorithm for Determining the Number of Paths in a Finite Graph," *Economic Comp. and Economic Cybern. Studies and Res.*, No. 2, pp. 81-85, 1967.

Pototchi, A., Oroveanu, M. I., Mustatea, St., and Marcu, A.

"The Organization and Coordination of Scientific Research Aiming to Determine the Required Type of Agricultural Aircraft, Using Graph Theory," *Economic Comp. and Economic Cybern. Studies and Res.*, No. 2, pp. 49-68, 1966.

Prabhakar, A.

"Topological Analysis of General Linear Networks," *Inst. Elec. Engrs.—Electronics Letters*, Vol. 2, No. 2, pp. 75-77, Feb. 1966.

Prager, W.

"On the Design of Communication and Transportation Networks," *Theory of Traffic Flow*, Elsevier Publ. Comp. Amsterdam, 1961.

Prideaux, J. D. C. A., and Cullingford, G.

"The Nature of the Decision Processes Implied in Network Analysis," in *Project Planning by Network Analysis*, H. J. M. Lombaers, editor, North-Holland Publ. Co., Amsterdam, pp. 154-163, 1969.

Pultr, A.

"A Remark on Common Fixed Sets of Commuting Mappings," *Comment. Math. Univ. Carolinae*, Vol. 4, pp. 157-159, 1963.

Pultr, A., and Hedrlin, Z.

"Relations (Graphs) with Given Infinite Semigroups," *Monatsh. Math.*, Vol. 68, pp. 421-425, 1964.

Pym, J. S.

"A Proof of Menger's Theorem," *Monatsh. Math.*, Vol. 73, pp. 81-83, 1969.

"A Proof of the Linkage Theorem," *J. Math. Anal. Appl.*, Vol. 27, pp. 636-638, 1969.

"The Linking of Sets in Graphs," *J. London Math. Soc.*, Vol. 44, pp. 542-550, 1969.

Quintas, L. V.

"One-Dimensional Cell Complexes With Homeotopy Group Equal to Zero," *Canad. J. Math.*, Vol. 16, pp. 353-357, 1964.

Quintas, L. V., and Supnick, F.

"On Some Properties of Shortest Hamilton Circuits," *Amer. Math. Monthly*, Vol. 72, pp. 977-980, 1965.

Rado, R.

"Note on the Transfinite Case of Hall's Theorem on Representatives," *J. London Math. Soc.*, Vol. 42, pp. 321-324, 1967.

Raimond, J.-F.

"Minimaximal Paths in Disjunctive Graphs By Direct Search," *IBM J. Res. & Dev.*, Vol. 13, pp. 391-399, July 1969.

"Disjunctive PERT Networks: Minimization of the Length of a Critical Path," in *Project Planning by Network Analysis*, H. J. M. Lombaers, editor, North-Holland Publ. Co., Amsterdam, pp. 164-171, 1969.

Ramamoorthy, C. V.

"Discrete System Representation and Analysis by Generating Functions of Abstract Graphs," *1965 IEEE Int. Convention Record*, Part 6, pp. 68-80, 1965.

"Connectivity Considerations of Graphs Representing Discrete Sequential Systems," *IEEE Trans. Electronic Computers*, Vol. EC-14, pp. 724-727, Oct. 1965.

Ramamoorthy, C. V., and Tufts, D. W.

"Reinforced Prefixed Comma-Free Codes," *IEEE Trans. Information Theory*, Vol. IT-13, pp. 366-371, 1967.

Ramanujacharyulu, C.

"Role of the Theory of Graphs in Operations Research," *CORSI Bulletin (India)*, pp. 93-106, 1957.

"Transport Networks with Pairs of Homologous Arcs," *Cahiers Centre Etudes Recherche Opér.*, Vol. 5, pp. 203-210, 1963.

"A Combinatorial Identify," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 271-273, 1969.

Ramsey, F.

"On a Problem of Formal Logic," *Proc. London Math. Soc.*, Vol. 30, No. 2, pp. 264-286, 1930.

Rao, A. R.

"An Extremal Problem in Graph Theory," *Israel J. Math.*, Vol. 6, pp. 261-266, 1968.

Rao, V. V. B., and Murti, V. G. K.

"Enumeration of All Circuits of a Graph," *Proc. IEEE*, Vol. 57, pp. 700-701, Apr. 1969.

"Enumeration of All Trees of Graph," *Electronics Letters*, Vol. 5, No. 13, pp. 282-283, Jun. 1969.

Rao, K. S., Rao, V. V. B., Sankaran, P., and Murti, V. G. K.

"Enumeration of All Cutsets of Graph," *Electronics Letters*, Vol. 5, No. 10, p. 208, May 1969.

Rashevsky, N.

"A Note on Relations Between Sets," *Bull. Math. Biophys.*, Vol. 28, pp. 309-313, 1966.

Ratib, I.

"A Proposition on Regions Which are Present in Certain Cubic Graphs," *Proc. Math. Phys. Soc. U.A.R. (Egypt)*, Vol. 3, pp. 53-57, 1947/48.

Ray-Chaudhuri, D. K.

"On Some Connections between Graph Theory and Experimental Designs and Some Recent Existence Results," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 149-166, 1970.

Ray-Chaudhuri, D. K., and Wilson, R. M.

"Solution of Kirkman's School Girl Problem," *Proceedings of the Symposia in Pure Mathematics, Combinatorics*, Vol. 19, Amer. Math. Soc.

Raymond, T. C.

"Heuristic Algorithm for the Traveling-salesman Problem," *IBM J. Res. Develop.*, Vol. 13, pp. 400-407, Jul. 1969.

Read, R. C.

"The Production of a Catalogue of Digraphs on 5 Nodes," *Scientific Report UWI/CCI*, Univ. of the West Indies, Kingston, 1966.

"The Use of S-Functions in Combinatorial Analysis," *Canad. J. Math.*, Vol. 20, pp. 808-841, 1968.

"Teaching Graph Theory to a Computer," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 161-174, 1969.

"Graph Theory Algorithms," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 51-78, 1970.

Read, R. C., King, C., Cadogan, C. C., and Morris, P.

"The Application of Digital Computer Techniques to the Study of Graph-Theoretical and Related Combinatorial Problems," University of the West Indies, Computing Centre, Jamaica, Rept. No. UWI/CC12, 62 pp., Aug. 1969.

Redfield J. H.

"The Theory of Group-reduced Distributions," *Amer. J. Math.*, Vol. 49, pp. 433-455, 1927.

Reed, M. B., and Brown, D. P.

"A General N-Terminal Network Equivalent," *J. Franklin Inst.*, Vol. 288, No. 6, pp. 483-497, Dec. 1969.

Reid, K. B.

"On Sets of Arcs Containing No Cycles in a Tournament," *Canad. Math. Bull.*, Vol. 12, pp. 261-264, 1969.

Reiter, R.

"Scheduling Parallel Computations," *J. ACM*, Vol. 15, No. 4, pp. 590-599, Oct. 1968.

Reuter, W. L., and Hale, H. W.

"Boolean Algebra Representation of Linear Graph K-set Definitions and Interrelationships," *Proc. of 11th Midwest Symposium on Circuit Theory*, Univ. Notre Dame, Indiana, pp. 434-440, 1968.

"Linear Graph K-set Definitions and Interrelationships," *Proc. of 11th Midwest Symposium on Circuit Theory*, Univ. Notre Dame, Indiana, pp. 424-433, 1968.

Richards, P.

"Precedence Constraints and Arrow Diagrams," *SIAM Rev.*, Vol. 9, pp. 548-553, 1967.

Richter, R.

"On an Extension of the Transportation Problem," *Wiss. Z. Hochsch. Verkehrswesen "Friedrich List" Dresden*, Vol. 11, pp. 73-77, 1964.

Riley, J. E.

"An Application of Graph Theory to Social Psychology," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 275-280, 1969.

Ringel, G.

"On the Complete Bipartite Graph," *Simposio Mathematico, Tipografia Oderisi-Ed. Gubbio*, pp. 141-145, 1964.

Ringel, G., and Youngs, J. W. T.

"Remarks on the Heawood Conjecture," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 133-138, 1969.

"Solution of the Heawood Map-Coloring Problem—Case 2," *J. Combinatorial Theory*, Vol. 7, pp. 342-352, 1969.

"Solution of the Heawood Map-Coloring Problem—Case 8," *J. Combinatorial Theory*, Vol. 7, pp. 353-363, 1970.

Riordan, J.

"Enumeration of Linear Graphs for Mappings of Finite Sets," *Ann. Math. Statist.*, Vol. 33, pp. 178-185, 1962.

"Forests of Labeled Trees," *J. Combinatorial Theory*, Vol. 5, pp. 90-103, 1968.

"Ballots and Trees," *J. Combinatorial Theory*, Vol. 6, pp. 408-411, 1969.

Roberts, F. D. K.

"Representations of Indifference Relations," Ph.D. Thesis, Stanford Univ., 1968.

Roberts, F. S.

"Indifference Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 139-146, 1969.

"On the Boxicity and Cubicity of a Graph," *Recent Progress in Combinatorics: Proceedings of the Third Waterloo Conference on Combinatorics*, W. T. Tutte (ed.), Academic Press, pp. 301-310, 1969.

Roberts, F. S., and Spencer, J. H.

"A Characterization of Clique Graphs," Rand Corp., Santa Monica, Calif., Rept. No. RM-5933-PR, 26 pp., Feb. 1969.

Robertson, M. M.

"A Generalisation of a Result of Abel with an Application to Tree Enumerations," *Proc. Edinburgh Math. Soc.*, Vol. 14, pp. 239-241, 1964/65.

Robertson, N.

"The Smallest Graph of Girth 5 and Valency 4," *Bull. Amer. Math. Soc.*, Vol. 70, pp. 824-825, 1964.

Robinson, R. W.

"Enumeration of Euler Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 147-153, 1969.

Rodriguez, J. E.

"A Graph Model for Parallel Computations," Ph.D. Dissertation, Massachusetts Inst. of Tech., Cambridge, Electronics Systems Lab., Rept. No. ESL-R-398, 133 pp., Sep. 1969.

Rosa, A.

"On Cyclic Decompositions of the Complete Graph Into $4M + 2$ -Gons," *Mat. Casopis Sloven. Akad. Vied.*, Vol. 16, pp. 349-352, 1966.

Rosen, R.

"Some Results in Graph Theory and Their Application to Abstract Relational Biology," *The Bulletin of Mathematical Biophysics*, Vol. 25, No. 2, pp. 231-241, Jun. 1963.

Rota, G. -C., and Mullin, R.

"On the Foundations of Combinatorial Theory: III. Theory of Binomial Enumeration," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 167-213, 1970.

Rothfarb, B., and Frisch, I. T.

"On 3-Commodity Flow Problem," *SIAM J. Appl. Math.*, Vol. 17, No. 1, pp. 46-58, Jan. 1969.

Rothschild, B.

"The Decomposition of Graphs into a Finite Number of Paths," *Canad. J. Math.*, Vol. 17, pp. 468-479, 1965.

Rothschild, B., and Whinston, A.

"Feasibility of Two Commodity Network Flows," *Operations Res.*, Vol. 14, pp. 1121-1129, 1966.

Rothschild, B., Whinston, A., and Kent, J.

"Computing Two Commodity Flows," *Operations Res.*, Vol. 16, pp. 446-450, 1968.

Russell, E. C., and Estrin, G.

"Measurement-based Automatic Analysis of FORTRAN Programs," *Proc. AFIPS 1969 Spring Joint Computer Conf.*, pp. 723-732, 1969.

Saaty, T. L.

"A Model for the Control of Arms," *Operations Res.*, Vol. 12, pp. 586-609, 1964.

Sabidussi, G.

"Minimal Isthmoids," *Monatsh. Math.*, Vol. 66, pp. 346-350, 1962.

"Infinite Euler Graphs," *Canad. J. Math.*, Vol. 16, pp. 821-838, 1964.

"Vertex-Transitive Graphs," *Monatsh. Math.*, Vol. 68, pp. 426-438, 1964.

Sachs, D.

"Graphs, Matroids, and Geometric Lattices," *J. Combinatorial Theory*, Vol. 9, pp. 192-199, 1970.

Sachs, H.

"A Non-Hamiltonian Cubic Planar Graph Devised by Kozyrev and Grinberg," *Beitrage Zur Graphentheorie* (H. Sachs, H. Voss, and H. Walter, editors), pp. 127-130, B. G. Teubner Gesellschaft, Leipzig, 1968.

"Finite Graphs (Investigations and Generalizations Concerning the Construction of Finite Graphs Having Given Chromatic Numbers and No Triangles)," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 175-184, 1969.

Saeks, R., and Maxwell, L. M.

"A Generalized Subgraph the K-Seg," *IEEE Trans. Circuit Theory*, Vol. CT-14, pp. 359-361, 1967.

Sallee, G. T.

"Incidence Graphs of Convex Polytopes," *J. Combinatorial Theory*, Vol. 2, pp. 466-506, 1967.

Salpeter, E. E.

"On Mayer's Theory of Cluster Expansion," *Ann. Physics*, Vol. 5, pp. 183-223, 1958.

Sarkar, P. K., and Mukherjee, T.

"On Graphical Studies of PEN-IM Sets of Boolean Functions and Their Minimizations," *Int. J. Control*, Vol. 1, No. 2, pp. 101-155, Feb. 1965.

Sauer, N.

"Extremal Point and Edge Sets in n-Graphs," *Canad. J. Math.*, Vol. 21, pp. 1069-1075, 1969.

"On the Existence of Regular n-Graphs with Given Girth," *J. Combinatorial Theory*, Vol. 9, pp. 144-147, 1970.

Schurmann, A.

"On the Application of Graph Theory to Determine the Number of Multisection Loops in a Program," *Algorytmy*, Vol. 2, pp. 73-81, 1964.

"Distribution of Circuits in a Finite Graph and Application of Graphs to Programming Theory," *Bull. Acad. Polon. Sci. Ser. Sci. Math. Astronom. Phys.*, Vol. 14, pp. 515-518, 1966.

Schwarz, B. L.

"Possible Winners in Partially Completed Tournaments," *SIAM Rev.*, Vol. 8, pp. 302-308, 1966.

"On Interchange Graphs," *Pacific J. Math.*, Vol. 27, pp. 393-396, 1968.

Scoins, H. I.

"Placing Trees in Lexicographic Order," *Machine Intelligence*, Vol. 3, pp. 43-60, 1969.

Sedláček, J.

"Some Properties of Interchange Graphs," *Theory of Graphs and Its Applications* (M. Fiedler, ed.), Prague, 1962; Reprinted, Academic Press, New York, pp. 145-150, 1962.

"Directed Graphs and Their Incidence Matrices," *Casopis Pest. Mat.*, Vol. 90, pp. 435-441, 1965.

"On the Number of Spanning Trees of Finite Graphs," *Casopis Pest. Mat.*, Vol. 94, pp. 217-221, 222, 1969.

Sedlar, M., and Bekey, G. A.

"Signal Flow Graphs of Sampled-Data Systems—New Formulation," *IEEE Trans. Automatic Control*, Vol. AC-12, No. 2, pp. 154-161, Apr. 1967.

Seidel, J. J.

"Strongly Regular Graphs," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 185-198, 1969.

"Strongly Regular Graphs with $(-1, 1, 0)$ Adjacency Matrix Having Eigenvalue 3," *Linear Algebra and Appl.*, Vol. 1, pp. 281-298, 1968.

Sekanina, M.

"On an Ordering of the Vertices of a Graph," *Časopis Pěst. Mat.*, Vol. 88, pp. 265-282, 1963.

Seliger, C. R.

"Finding Polynomial Roots with Linear-Graph Technique," *Instruments & Control Systems*, Vol. 41, No. 6, pp. 93-94, Jun. 1968.

Seppänen, J. J.

"Algorithm 399 Spanning Tree (H)," *Comm. ACM.*, Vol. 13, No. 10, Oct. 1970.

Shank, H. S.

"Graph Property Recognition Machines," Cornell University, Rept. No. AD-682323, 17 pp., Oct. 1968.

Shannon, C. E.

"Presentation of the Maze-Solving Machine," *Trans. of the 8th Cybernetics Conf.*, Josiah Macy Jr. Foundation, New York, N. Y., pp. 173-180, 1952.

"The Zero Error Capacity of a Noisy Channel," *Trans. Symp. Inform. Theory, IRE*, Vol. IT-2, pp. 8-12, 1956.

Shapiro, R. M., and Saint, H.

"The Representation of Algorithms," Applied Data Research Inc., New York, Corporate Research Center, Rept. No. CA-6908-2331, Vol. 2, 102 pp., Sep. 1969.

Shimamoto, Y.

"Graph Theory and Parametric Representations of Feynman Amplitudes," *Nuovo Cimento*, Vol. 25, pp. 1292-1313, 1962.

Shinoda, S.

"Finding All Possible Directed Trees of Directed Graph," *Electronics & Communications in Japan*, Vol. 51, No. 7, pp. 45-46, Jul. 1968.

"On Hamilton Circuits of Directed Graph," *Electronics & Communications in Japan*, Vol. 51, No. 7, pp. 46-47, Jul. 1968.

Shirakawa, I., Kasami, T., and Ozaki, H.

"On the Coding of a Path in a Graph and Some Applications," *SIAM J. Appl. Math.*, Vol. 16, pp. 51-61, 1968.

Shirakawa, I., Takahashi, and Ozaki, H.

"Planar Decomposition of a Complete Bipartite Graph," *Tech. Rep., Osaka Univ.*, Vol. 17, pp. 221-227, 1967.

Shirey, R. W.

"Implementation and Analysis of Efficient Graph Planarity Testing Algorithms," Ph.D. Dissertation, Dept. of Computer Sciences, University of Wisconsin, Wisc., 1969.

"Algorithmic Embedding of Graphs into the Plane," Thesis, U. of Wisc., from Computer Sc. Dept., Jan. 1969.

Shirkhande, S. S.

"On a Conjecture of Bruck on Pseudo Net-graphs," *J. Algebra*, Vol. 8, pp. 418-422, 1968.

Simmons, R. F.

"Storage and Retrieval of Aspects of Meaning in Directed Graph Structures," *Comm. ACM*, Vol. 9, pp. 211-214, March 1966.

Simões Pereira, J. M. S.

"On the Boolean Matrix Equation $M' = v_{1-1}^d M^1$," *J. Assoc. Comput. Mach.*, Vol. 12, No. 3, pp. 376-382, July 1965.

"Boolean Permanents, Permutation Graphs and Products," *SIAM J. Appl. Math.*, Vol. 16, pp. 1251-1254, 1968.

"Pseudosymmetry, Circuit-Symmetry, and Path-Symmetry of a Digraph," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 295-300, 1969.

"A Note on the Tree Realizability of a Distance Matrix," *J. Combinatorial Theory*, Vol. 6, pp. 303-310, 1969.

Sims, C. C.

"Graphs and Finite Permutation Groups I, II," *Math. Z.*, Vol. 95, pp. 76-86, 1967; Vol. 103, pp. 276-281, 1968.

Sinden, F. W.

"Topology of Thin Film RC Circuits," *Bell System Tech. J.*, Vol. 45, pp. 1639-1662, 1966.

Singh, J.

"A Treatment of Ties in Paired Comparisons," Ph.D. Thesis, Fla. State Univ., *Dis. Abs.*, Vol. 28, p. 2039-B, 1967.

Singleton, R.

"Generalized Snake-in-the-Box Codes," *IEEE Trans. Electronic Computers*, Vol. EC-15, pp. 596-602, 1966.

Slepian, D.

"Number of Types of Linear Graphs," Tech. Mem. Bell Tel. Lab., Jun. 22, 1953.

Slepian, P.

Mathematical Foundations of Network Analysis, Springer, 1968.

Sloane, N. J. A.

"Hamiltonian Cycles in a Graph of Degree 4," *J. Combinatorial Theory*, Vol. 6, pp. 311-312, 1969.

Smith, C. A. B., and Tutte, W. T.

"On Unicursal Paths in a Network of Degree 4," *Amer. Math. Monthly*, Vol. 48, pp. 233-237, 1941.

Sobczyk, A.

"Some Unsymmetric Combinatorial Numbers," *Bull. Amer. Math. Soc.*, Vol. 72, pp. 512-514, 1966.

Spialter, L.

"The Atom Connectivity Matrix and Its Characteristic Polynomial," *J. Amer. Chem. Soc.*, Vol. 85, pp. 2012-3, 1963; *J. Chem. Documentation*, Vol. 4, pp. 261-274, 1964.

Srinivasan, S., and Sujeer, V. N.

"New Equivalence Technique in Linear Graph Theory," *Instn. Engrs. (India)*, Vol. 44, No. 12, pp. 496-512, Aug. 1964.

Stear, E. B., and Stubberud, A. R.

"Nonstationary Signal Flow Graph Theory," *U. S. Gov. Res. Repts.* Document Nos. PB-155 306 and AD-252 813, 1960.

Steffen, M. R., and Dent, W.

"Construction of Redundant Network with Minimum Distance," *J. Franklin Inst.*, Vol. 289, No. 3, pp. 223-231, Mar. 1970.

Stehman, C., Maenpaa, J., and Stahl, W.

"Complete Tree Generation—Some Practical Experience," *IEEE Trans. on Circuit Theory*, Vol. CT-16, pp. 548-550, Nov. 1969.

Stewart, M. J.

"A Topological Influence: Homeomorphically Irreducible Graphs," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 281-282, 1969.

Stockton, F. G.

"Linearization and Standardization of Graphs, Control of a Factorial Enumeration Related to Graph Isomorphism," Shell Development Co., PB-179837, 54 pp., Feb. 1968.

Storwick, R. M.

"Improved Construction Techniques for (d,k) Graphs," *IEEE Trans. on Computers*, Vol. C-19, No. 12, Dec. 1970, pp. 1214-1216.

Stumpff, G.

"A Study of System Reliability Using Topological Methods," Univ. Ill. Coord. Sci. Lab., August 1966.

Sumner, D. P.

"On a Problem of Erdos," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 319-322, 1969.

Swan, R. G.

"An Application of Graph Theory to Algebra," *Proc. Amer. Math. Soc.*, Vol. 14, pp. 367-373, 1963.

Swen, G.

"Development of the Spanning Tree Concept in Graph Theory with Applications to the Shortest-Route Problem," Ph.D. Thesis, Univ. Pitt., 1967.

Szwarc, W.

"The Transportation Problem with Stochastic Demand," *Management Sci.*, Vol. 11, pp. 33-50, 1964/65.

Szwarc, W., and Wintgen, G.

"The Number of Transportation Bases," *Mathematica (Cluj)*, Vol. 7, No. 30, pp. 155-161, 1965.

Tait, P. G.

"Remarks on the Colouring of Maps," *Proc. Royal Soc. Edinburgh*, Vol. 10, p. 729, 1880.

Takenaka, Y.

"Graph Theoretic Concepts and the Incidence Matrix," *Information and Control*, Vol. 17, pp. 113-121, 1970.

Tanaka, E.

"Diakoptical Formulas for Calculating Paths and Cuts," *Electron. Commun. Japan*, Vol. 50, No. 9, pp. 1-9, 1967.

"An Algebraic Theory of Network-Theoretic Problems of Communication Systems," *Electron. Commun. Japan*, Vol. 50, No. 9, pp. 10-20, 1967.

Teh, H. H.

"A Fundamental Theorem Concerning the Chromatic Number of a Group Graph," *Nanta Math.*, Vol. 1, pp. 76-81, 1966/67.

Teh, H. H., and Choo, E. U.

"Some Results on Coherent Graphs," *J. Nanyang Univ.*, Vol. 1, pp. 289-308, 1967.

Teitz, M. B., and Bart, P.

"Heuristic Methods for Estimating the Generalized Vertex Median of a Weighted Graph," *Operations Res.*, Vol. 16, No. 5, pp. 955-961, Sep.-Oct. 1968.

Terry, C. M., Welch L. R., and Youngs, J. W. T.

"The Genus of the Complete Graph," *Bull. Amer. Math. Soc.*, Vol. 7, pp. 653-660, 1965.

"Solution of the Heawood Map-Coloring Problem-Case 4," *J. Combinatorial Theory*, Vol. 8, pp. 170-174, 1970.

Tiernan, J. C.

"An Efficient Search Algorithm to Find the Elementary Circuits of a Graph," *J. Assoc. Comput. Mach.*, Vol. 13, No. 12, pp. 722-726, Dec. 1970.

Toida, S.

"A Characterization of Biplanar Graphs," Coordinated Science Lab., Univ. of Ill., Urbana, Rept. No. R-415, 45 pp., May 1969.

"Some Properties of a Euler Graph," Coordinated Science Lab., Univ. of Ill., Urbana, Rept. No. R-427, 10 pp., Sep. 1969.

"On Dual of a Graph on a Surface of Genus 1," Coordinated Science Lab., Univ. of Ill., Urbana, Rept. No. R-333, 14 pp., Sep. 1969.

Traiger, I. L., and Gill, A.

"On an Asymptotic Optimization Problem in Finite, Directed, Weighted Graphs," *Information and Control*, Vol. 13, No. 6, pp. 527-533, Dec. 1968.

Trent, H. M.

"A Decomposition Theorem Concerning Linear Graphs," *J. Math. Mech.*, Vol. 13, pp. 325-328, 1964.

"On Connection Between Properties of Oriented Linear Graphs and Analyses of Lumped Physical Systems," *U. S. Bur. Standards J. Research Mathematics & Mathematical Physics*, Vol. 69B, No. 1-2, pp. 79-84, Jan.-Jun. 1965.

"Some Labeling Theorems For Planar Linear Graphs: A Contribution to the Four-Color Problem," Final Rept., Naval Research Lab., Washington, D. C., 48 pp., Oct. 1969.

Trent, H. M., and Auslander, L.

"Generalized Automorphisms of Labelled Graphs and Graphical Invariants," *J. Math. and Phys.*, Vol. 42, pp. 78-84, 1963.

Trufanov, S. V.

"Some Problems of Distance on a Graph," *Engrg. Cybernetics*, No. 3, pp. 60-66, 1967.

Tsoi, S.

"Finding Extremal Paths and Paths of Given Length in an Arbitrary Network Graph," *Trudy Inst. Gorn. Dela. A. N. Kaz. SSR.*, Vol. 26, pp. 41-48, 1965.

Tucher, A. C.

"Two Characterizations of Proper Circular-Arc Graphs," Doctoral Dissertation; Stanford University, 1969.

Tuero, M.

"Methods of Signal-Flow Graphs," *Slaboproudy Cbxor*, Vol. 20, pp. 608-615, 1959.

"A Contribution to the Theory of Cyclic Graphs," *Matrix Tensor Q.*, Vol. 11, pp. 74-80, 1961.

Turner, J.

"A Graph-Theoretical Model for Periodic Discrete Structures," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 155-160, 1969.

"Key-Word Indexed Bibliography of Graph Theory," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 189-330, 1969.

Turner, J. B., and Kautz, W. H.

"A Survey of Progress in Graph Theory in the Soviet Union," *SIAM Rev. (Supplement)*, Vol. 12, pp. 1-68, 1970.

Tutte, W. T.

"From Matrices to Graphs," *Canad. J. Math.*, Vol. 16, pp. 108-127, 1964.

"Lectures on Matroids," *J. Res. Nat. Bur. Standards Sect. B.*, Vol. 69B, pp. 1-47, 1965.

"A Correction to: 'On the Algebraic Theory of Graph Colorings,'" *J. Combinatorial Theory*, Vol. 3, p. 102, 1967.

"On Dichromatic Polynomials," *J. Combinatorial Theory*, Vol. 2, pp. 301-320, 1967.

"On Even Matroids," *J. Res. Nat. Bureau Standards Sect. B.*, Vol. 71B, pp. 213-214, 1967.

"On the Enumeration of Planar Maps," *Bull. Amer. Math. Soc.*, Vol. 74, pp. 64-74, 1968.

"On the Enumeration of Four-Colored Maps," *SIAM J. Appl. Math.*, Vol. 17, pp. 454-460, 1969.

"On the Enumeration of Almost Bicubic Rooted Maps," Rand Corp., Santa Monica, California, Rept. No. RM-5887-PR, Feb. 1969.

"Even and Odd 4-Colorings," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, N. Y., pp. 161-169, 1969.

"Projective Geometry and the 4-Color Problem," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 199-207, 1969.

"Connectivity in Matroids," in *Graph Theory and Its Applications*, edited by B. Harris, Academic Press, N. Y., pp. 113-119, 1970.

"On Chromatic Polynomials and the Golden Ratio," *J. Combinatorial Theory*, Vol. 9, pp. 289-296, 1970.

"Toward a Theory of Crossing Numbers," *J. Combinatorial Theory*, Vol. 8, pp. 45-53, 1970.

Urquhart, R.

"Degree Constrained Subgraphs of Linear Graphs," Ph.D. Thesis, Univ. Mich., 1967.

Vandeventer, J.

"Graph Theory and 'Instant Insanity'," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 283-286, 1969.

Veblen, O.

"An Application of Modular Equations in Analysis Situs," *Ann. of Math.*, Vol. 14, pp. 86-94, 1912.

Verduyn, F. M., and Chan, S. P.

"Analysis of Active Networks by Digital Computer Using Flow-graph Technique," *IEEE Conference Rec. 2nd Asilomar Conference on Circuits & Systems*, Pacific Grove, Calif., pp. 120-123, 1968.

Vizing, V.

"Chromatic Class of Multigraphs," *Cybernetics*, Vol. 1, No. 3, pp. 32-41, 1965.

Vleduts, G., and Seifer, A. L.

"Soviet Review of Machine Information-Logical Methods in Chemistry," *Zavodskaya Laborator.*, Vol. 28, pp. 1224-1232, 1962.

Walker, K.

"The Analogue of Ramsey Numbers for Planar Graphs," *Bull. London Math. Soc.*, Vol. 1, pp. 187-190, 1969.

Walkup, D. W.

"The Number of Planar Trees," Mathematical Note No. 624, Mathematics Research Lab., Boeing Scientific Research Laboratories, 10 pp., Sep. 1969.

Wall, C. E.

"Arc Digraphs and Traversability," *The Many Facets of Graph Theory*, edited by G. Chartrand and S. F. Kapoor, Springer-Verlag, New York, pp. 287-290, 1969.

Wallis, W. D.

"Some Non-Isomorphic Graphs," *J. Combinatorial Theory*, Vol. 8, pp. 448-449, 1970.

Watkins, M. E.

"A Lower Bound for the Number of Vertices of a Graph," *Amer. Math. Monthly*, Vol. 74, p. 297, 1967.

"On the Existence of Certain Disjoint Arcs in Graphs," *Duke Math. J.*, Vol. 35, pp. 231-246, 1968.

"A Theorem on Tait Colorings with an Application to the Generalized Petersen Graphs," *J. Combinatorial Theory*, Vol. 6, pp. 152-164, 1969.

"A Theorem on Tait Colorings with An Application to the Generalized Petersen Graphs," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 171-177, 1969.

"Some Classes of Hypoconnected Vertex-Transitive Graphs," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 323-328, 1969.

"Connectivity of Transitive Graphs," *J. Combinatorial Theory*, Vol. 8, pp. 23-29, 1970.

Weinberg, L.

"A Survey of Linear Graphs: Fundamentals and Applications to Network Theory," *Matrix Tensor Quart.*, Vol. 14, pp. 103-115, 1963/64.

Weindling, M. N., and Golomb, S. W.

"Multilaminar Graphs," Douglas Missile and Space Systems Div., Paper 3594, Sep. 1965.

Welch, J. T., Jr.

"Cycle Algorithms for Undirected Linear Graphs and Some Immediate Applications," *Proc. ACM 20th Nat. Conf.*, pp. 296-301, 1965.

Welsh, D. J. A.

"On Dependence in Matroids," *Canad. Math. Bull.*, Vol. 10, pp. 599-603, 1967.

"Kruskal's Theorem for Matroids," *Proc. Cambridge Philos. Soc.*, Vol. 64, pp. 3-4, 1968.

"Euler and Bipartite Matroids," *J. Combinatorial Theory*, Vol. 6, pp. 375-377, 1969.

"A Bound for the Number of Matroids," *J. Combinatorial Theory*, Vol. 6, pp. 313-316, 1969.

"Transversal Theory and Matroids," *Canad. J. Math.*, Vol. 21, pp. 1323-1330, 1969.

Welsh, D. J. A., and Powell, M. B.

"An Upper Bound for the Chromatic Number of a Graph and Its Application to Timetabling Problems," *Computer J.*, Vol. 10, pp. 85-86, May 1967.

White, A. T.

"The Genus of the Complete Tripartite Graph $K_{m,n,n}$," *J. Combinatorial Theory*, Vol. 7, pp. 283-285, 1969.

White, L. J.

"A Parametric Study of Matchings and Coverings in Weighted Graphs," Ph.D. Thesis, Univ. Mich., *Dis. Abs.*, Vol. 28, p. 2960-B, 1968.

"Minimum Partitions and the Shannon Switching Game," Systems Engineering Lab., Michigan Univ., Ann Arbor, Rept. No. 06920-16-T, 114 pp., Jan. 1969.

Whitney, H.

"On the Abstract Properties of Linear Dependence," *Amer. J. Math.*, Vol. 57, pp. 509-533, 1935.

Wilf, H. S.

"The Möbius Function in Combinatorial Analysis and Chromatic Graph Theory," *Proof Techniques in Graph Theory (Proc. Second Ann Arbor Graph Theory Conf., 1968)*, edited by F. Harary, Academic Press, New York, pp. 179-188, 1969.

Wilkov, R. S., and Kim, W. H.

"A Practical Approach to the Chromatic Partition Problem," *J. Franklin Inst.*, Vol. 289, No. 5, pp. 333-349, May 1970.

Williamson, S. G.

"Operator Theoretic Invariants and the Enumeration Theory of Pólya and de Bruijn," *J. Combinatorial Theory*, Vol. 8, pp. 162-169, 1970.

Wilson, M. A.

"Contingency Modeling by Oriented Graphs," *Bul. Operations Res. Soc. Am.*, Vol. 15, Suppl. 1, pp. 8-67, 1967.

Winter, Z.

"Graphs & Direct Sum Matrices," *IRE Trans. C.T.*, Vol. CT-8, pp. 77-78, 1961.

Wolfberg, M. S.

"Determination of Maximally Complete Subgraphs," Univ. of Penn. Moore School of Elec. Engineering, NONR Contract No. 551, (40), May 7, 1965.

"An Interactive Graph Theory System," Ph.D. Dissertation, The Moore School of Electrical Engineering, Univ. Pennsylvania, Philadelphia, Pa., 1969.

Wollmer, R. D.

"Removing Arcs from a Network," *Operations Res.*, Vol. 12, pp. 934-940, 1964.

Woo, L.

"An Algorithm for Straight Line Representation of Simple Planar Graphs," IBM New York Scientific Center, Report No. 320-2918, 19 pp., Oct. 1967.

"An Algorithm for Straight-line Representation of Simple Planar Graphs," *J. Franklin Inst.*, Vol. 287, pp. 197-208, 1969.

Wright, E. M.

"A Relationship Between Two Sequences," *Proc. London Math. Soc.*, Vol. 17, No. 3, pp. 296-304, 1967.

"A Relationship Between Two Sequences. III," *J. London Math. Soc.*, Vol. 43, pp. 720-724, 1968.

"The Number of Graphs on Many Unlabelled Nodes," *Math. Ann.*, Vol. 183, pp. 250-253, 1969.

"Asymptotic Relations Between Enumerative Functions in Graph Theory," *London Mathematical Society, Third Series* Vol. XX, Pt. 3, pp. 558-572, Apr. 1970.

Yang, K. -W.

"Chromatic Number of Cartesian Sum of Two Graph," *Proc. Amer. Math. Soc.*, Vol. 19, pp. 617-618, 1968.

Yefimova, Ye.

"Properties of Linguistic Control Graphs," *Cybernetics*, Vol. 2, No. 4, pp. 178-186, 1966.

Yeh, R.

"Weak Congruence Relations on Graphs," Ph.D. Thesis, Univ. Ill., 1966.

Yen, J. Y.

"Some Algorithms for Finding the Shortest Routes Through the General Networks," *Computing Methods in Optimization Problems*, Vol. 2, pp. 377-388, Sep. 1968.

"An Algorithm for Finding Shortest Routes From All Source Nodes to a Given Destination in General Networks," *Quart. Appl. Math.*, Vol. 27, No. 4, pp. 526-530, Jan. 1970.

Yoeli, M.

"Binary Ring Sequences," *Amer. Math. Monthly*, Vol. 69, pp. 852-855, Nov. 1962.

Yoeli, M., and Ablow, C. M.

"Subdirect Decomposition of Transition Graphs," A. F. Camb. Res. Lab. Mass. Rpt. AFCRL-65-758, N. 3, 1965.

"Subdirect Decompositions of Transformation Graphs," *Information & Control*, Vol. 12, pp. 426-441, May-Jun. 1968.

Yoeli, M., and Turner, J. B.

"Decomposition Theory of Semiautomata and Automata," Stanford Res. Inst. Report AFCRL-67-0686, Dec. 1967.

Yoeng-Jin, C., and Tseng-Hung, L.

"On the Shortest Aborecence of a Directed Graph," *Sci. Sinica*, Vol. 14, pp. 1396-1400, 1965.

Younger, D. H.

"Maximum Families of Disjoint Directed Cut Sets," in *Recent Progress in Combinatorics*, edited by W. T. Tutte, Academic Press, N. Y., pp. 329-333, 1969.

Youngs, J. W. T.

"Irreducible Graphs," *Bull. Amer. Math. Soc.*, Vol. 70, pp. 404-405, 1964.

"The Genus of K_{12} ," Rand Corp., Report No. RM-4759-PR, Mar. 1966.

"Solution of the Heawood Map-Coloring Problem-Cases 3, 5, 6, and 9," *J. Combinatorial Theory*, Vol. 8, pp. 175-219, 1970.

"The Heawood Map-Coloring Problem-Cases 1, 7, and 10," *J. Combinatorial Theory*, Vol. 8, pp. 220-231, 1970.

"The Mystery of the Heawood Conjecture," in *Graph Theory and Its Applications*, Academic Press, New York, pp. 17-50, 1970.

Zame, A.

"Orthogonal Sets of Vectors Over Z_m ," *J. Combinatorial Theory*, Vol. 9, pp. 136-143, 1970.

Zaslavskii, S.

"The Structure of One Type of Associative Net," *Cybernetics*, Vol. 1, No. 3, pp. 42-45, 1965.

Zobrist, G. W.

"Signal-flow Graphs As An Aid in the Design of Linear Circuits by Computer," in *Computer-Aided Integrated Circuit Design*, pp. 160-196.

Zobrist, G. W., and Lago, G. V.

"Digital Computer Analysis of Passive Networks Using Topological Formulas," *Missouri Univ. Eng. Experiment Station Ser.-Bul.*, Vol. 59, 20 pp., Mar. 29, 1965.